

Coding, STEM and eLearning



St. Joan of Arc Secondary School

Mindstorm EV3 Course X PolyU x Enriched IT Activities

- Promote coding and robotics
- By using Lego EV3



Mindstorm EV3 Course X PolyU

- Partnership with PolyU since 2014
- 40 hours program in a week
- Trained 100+ S1, S4 and 5 ICT and Physics students every year since.
- Also serves as community service of PolyU Engineering Students



News Coverage at Kung Kao Pao



請選擇 本期新聞 ▼

聖貞德中學與理大 舉辦機械人製作班

刊登日期: 2014.08.08

標籤連結: [教育](#)



公教報 3677期

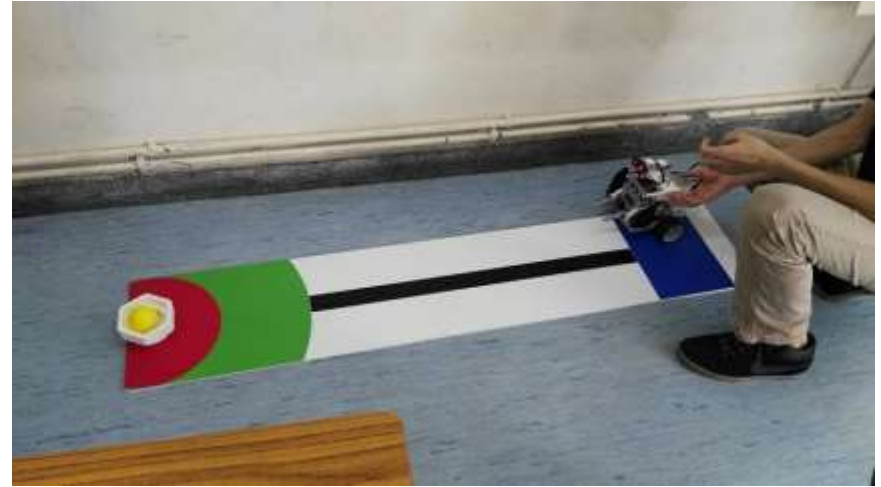
教宗方濟各
及本篤榮休專頁



（本報訊）聖貞德中學與香港理工大學工業及系统工程學系合作舉辦為期一星期的機械人製作訓練班（圖），訓練班於七月十八日完成，並於當天舉行隊際畢業盃大賽。活動期間，理工大學七十八位學生到校，與三十八位聖貞德中學學生組成十九隊，進行共四十小時的「LEGO Mindstorms EV3培訓課程」。課程中，學生學習使用LEGO建構機械人，並運用機械人完成指定任務。

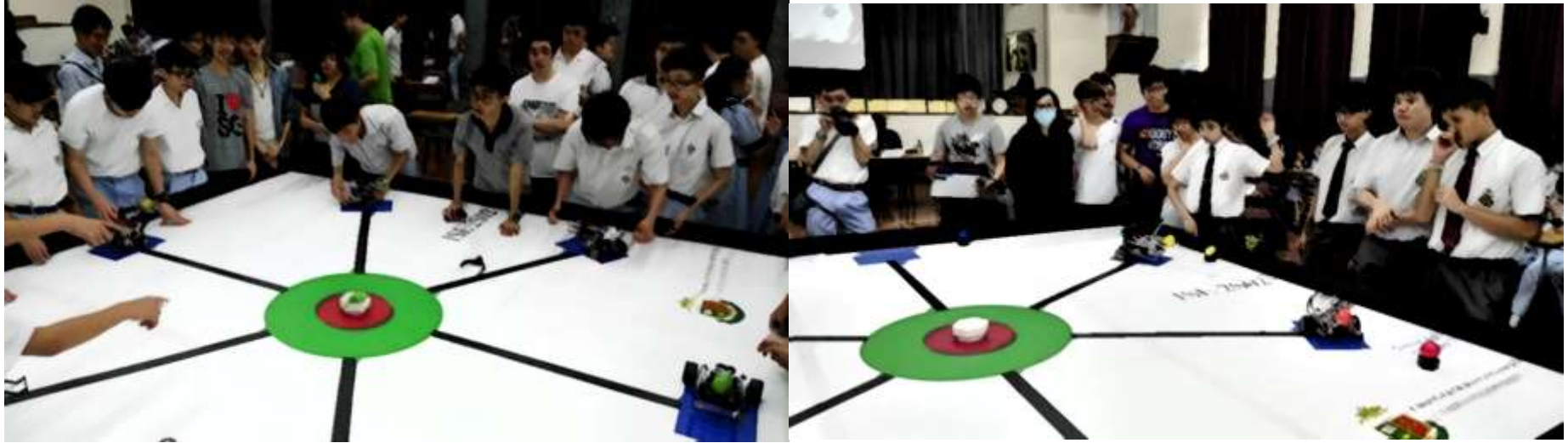
隊際畢業盃大賽後，聖貞德中學教師及理工大學代表分別展示自製的機械人，進行不同的任務，互相觀摩。校方期望經過是次培訓，增進學生在數理方面的知識，提高他們對相關科目的興趣，亦希望學生發揮創意和解難能力，建立團隊精神。（公）

Mindstorm EV3 Course X PolyU



- Let's program the EV3 and grab the ball!

Mindstorm EV3 Course X PolyU



Joint School Competition using EV3!

Mindstorm EV3 Course X PolyU



- After a week of training, our boys won!

Hour of Code Event X Microsoft



Hour of Code Event

- Joined since 2015
- 100+ students joined the activity
- One of 76 schools which take up the activity
- Recognized by Microsoft as one of the most participated school in Hong Kong

世界各地將舉辦 **147,826** 場一小時的程式設計課程活動, 在 **Hong Kong** 有 **76** 場



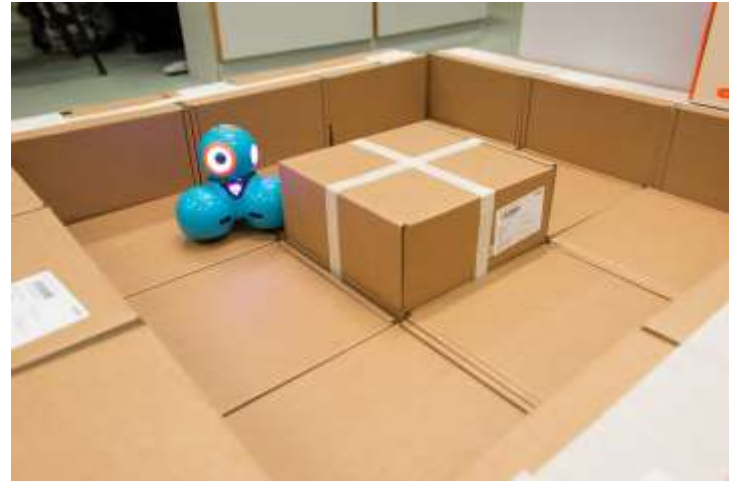
Scratch + Dash and Dot



- Introduced in 2015
- Teach together with our existing school based scratch program
- More Enjoyable

Scratch + Dash and Dot

- Scratch training started in 2012
- Dash and Dot adopted in 2015



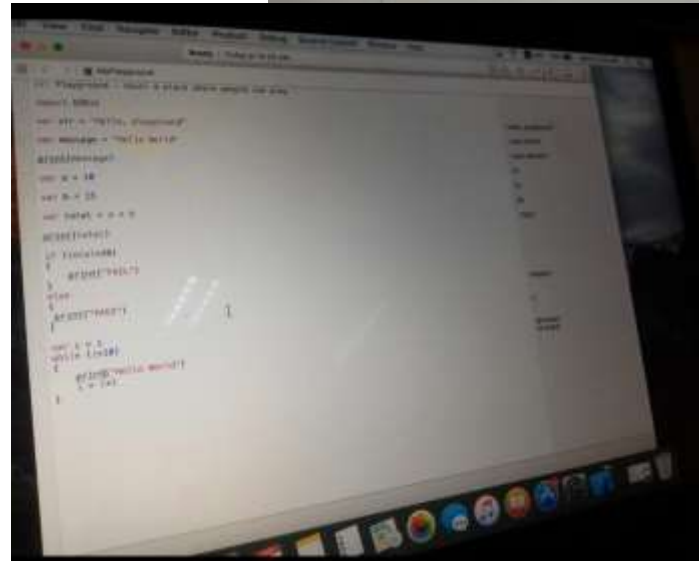
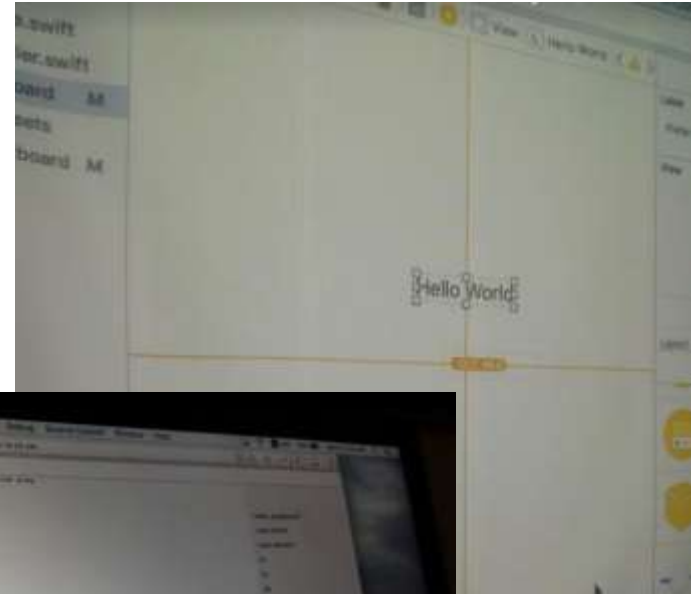
ICT Lesson on Coding



ICT Lesson on Coding

Apple Swift Coding in ICT

- One of the Pilot schools in 2015
- Trained 50+ students for advanced swift coding capabilities
- Adopted Flipped Classroom Strategy
- Got 100 Macbook donation to promote swift code education in 16/17



Computer Lesson

- Piloted nearpod in lesson in 2012/13
- Improved
- Student-Teacher Interaction
- Student-Student Interaction



Computer Lesson in 2012



- Started at School Library
- “iPad Learning Centre”
- Pilot program brought to English Lesson as well.

iPad Learning Centre in 2012/13



- Installed a projector at library with Apple TV
- Refitted of notebook trolley as iPad trolley
- Used Airport Extreme as AP



e-English Lesson in 2013

Training on Nearpod was given to
all English Teachers



e-English Lesson in 2013



Pilot Support by IT Department



IT Coordinator may visit e-learning class for support and make suggestions on e-Pedagogy



News Coverage at Kung Kao Pao



教師伍沛義、教師林浩基、校長黃慧珍及教師黃國璋。

[Previous](#) [Resume](#) [Next](#)



聖貞德鑽禧 轉為男女校 重IT教育與學生生涯規劃

刊登日期: 2014.12.05

標籤連結: [教育](#)



（本報訊）天主教男校聖貞德中學明年慶祝創校鑽禧，並於下一學年轉型為男女校，以配合社會的改變；該校近年亦積極提升資訊科技學與教及生涯規劃，為學生提供全人教育。

聖貞德中學創辦於一九五五年，明年踏入六十年鑽禧。該校將於十二月十三日舉行校慶啟動禮。

十二月十三日鑽禧校慶啟動禮

學校近年起推動資訊科技學與教，該校早前已成為思科網絡學院（Cisco Networking Academy）的一員，亦有教師成為思科網絡學院講師，可為學生教授相關課程，讓學生掌握最新的電腦網路和互聯網技術，提升升學及就業的競爭力。

此外，學校開展了「平板電腦互動學習計劃」，並建立了「iPad平板電腦學習中心」；校方指出，平板電腦互動學習既能配合學校課程，另一方面亦能提高學生的自主學習，從而提升學生學習表現。

負責教師黃國璋十一月二十六日對本報指出，教師會使用無線網絡互動多媒體教學，利用坊間的免費教學應用程式，按學生需要把課程重點、教學影片、學生答題統計或成績分析呈上。

有使用平板電腦教學的教師林浩基說，師生之間的互動很重要，他說平日手持平板電腦教學，邀請學生在他的平板電腦上答題目，學生對此方法感到興趣，能營造學習氣氛。

Adopted Various LMS

We make good use of Cloud Platform



iPad Mobile Learning X Geography



- Mobile Learning
- Using EduVentureX
- Trained student to use iPad and Apps before visit

iPad Mobile Learning X Geography



Students were engaged



iPad Mobile Learning X Geography



Students enjoyed every checkpoint and worked on their tasks in EduVentureX

iPad Mobile Learning X Geography



- Used 25 iPads
- 10 Pocket WiFis
- 5 Groups of students

iPad Mobile Learning X Geography



Thanks for the support of
Centre of Excellence, EDB

iPad Mobile Learning X Geography



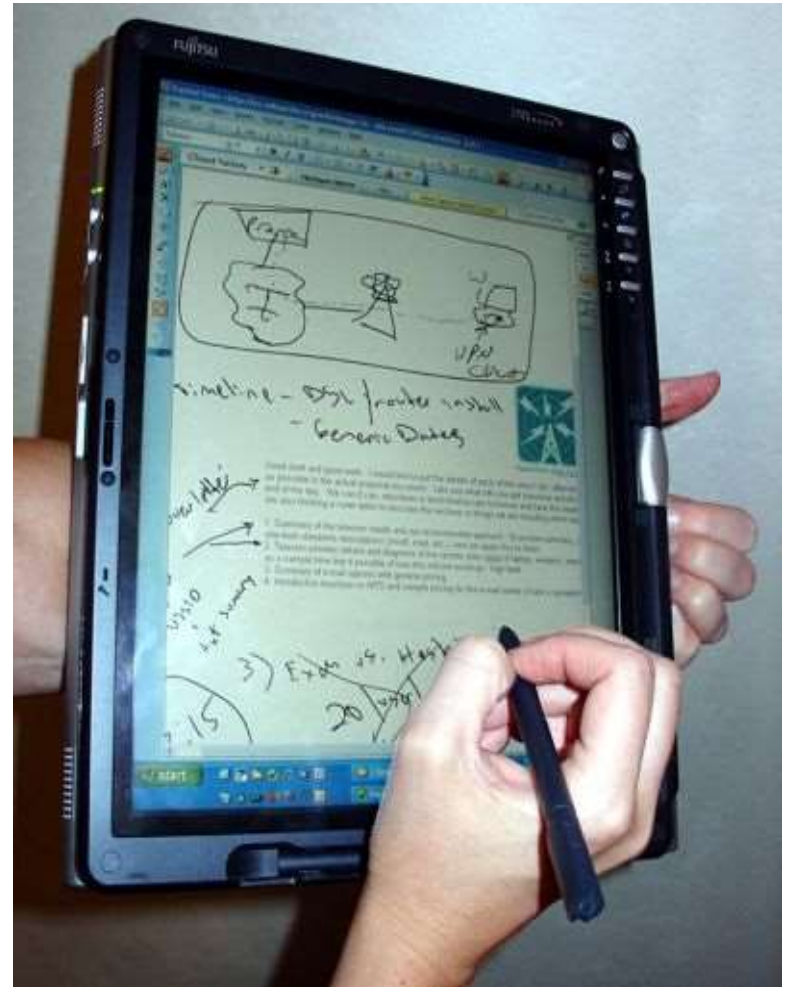
參考：

EduVentureX 是由香港中文大學資訊科技教育促進中心研發。在進行戶外考察時所遇到的困難，例如學生參與度不足、個別差異以及在學習過程中缺乏探究性，EduVentureX 可提供有效的解決方法。EduVentureX 是一款在 iPad 或 iPhone 移動設備上運行的應用程式（App），學習者將指定教材下載至應用程式中，通過全球定位系統（GPS），針對教材中設計的不同地點開展探究活動，回答相關問題，答案會被自動儲存於應用程式中。借助此應用程式，學習者可親身體驗與真實情境的接觸，擁有與眾不同的戶外移動學習經歷。

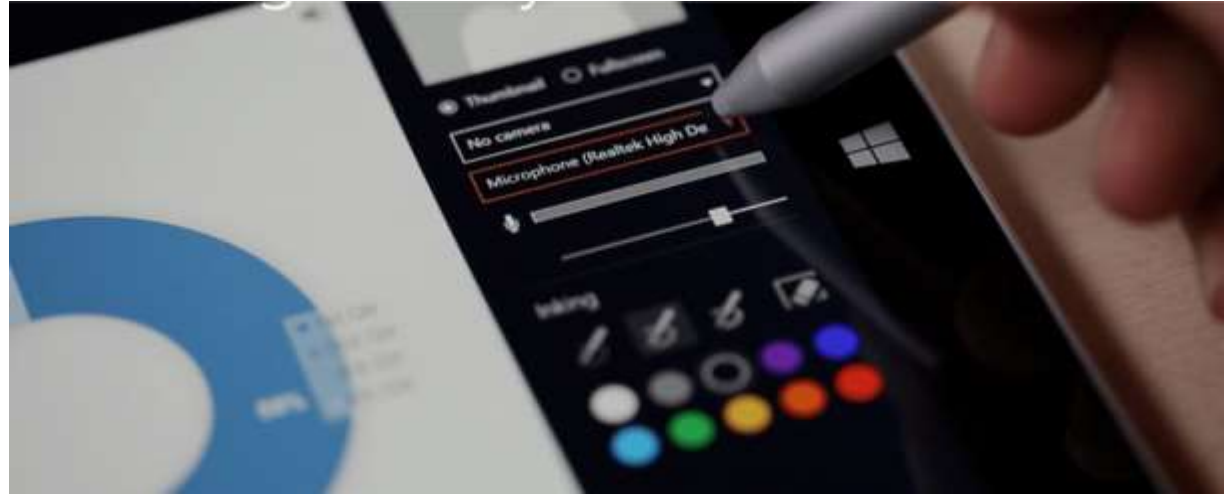
Leaflet was issued to promote the concept of mobile learning for parents

Math e-Lesson 1.0

- Tablet PCs in Mathematics Lessons since 2008
- Serves as mobile e-whiteboard
- E-notes can be produced



Math e-Lesson 2.0 - Surface + Office MIX



- Use of Microsoft Surface – Lighter!
- Use of Office Mix
- Record Lesson video for revision and flipped classroom

Math e-Lesson 2.0 - Surface + Office MIX

SJA 15 - 16 中二數學堂 2CH Mathematics Class

- Videos on OfficeMix
- We can know
- Whether students watched
- Which parts they would playback most
- Facilitate teachers understand students' weakness

第一次統測討論 1st UT Discussion

甲部 (第一題至第二十題, 每題兩分。)

1. 把 0.073648 捨入至三位有效數字。

A. 0.07
B. 0.074
C. 0.0736
D. 0.07365

2. 利用上捨入法估算數式 $-26.8 + 73.5 + 59.1$, 可得

A. $26 + 75 + 59$.
B. $27 + 76 + 60$.
C. $26 + 75 + 60$.
D. $26 + 75 + 59$.

2 第四課 Chapter 4

下列各題中, 根據連係法解二元一次方程的解, (如有需要, 至某處取一位小數。)

(i) $\begin{cases} 2x - 4y = 0 \\ 2x + y = 1 \end{cases}$ (ii) $\begin{cases} x + y + 1 = 0 \\ 3x - 2y + 8 = 0 \end{cases}$ (iii) $\begin{cases} 7x - 8y = 8 \\ x + 2y = 4 \end{cases}$

$x = 4, y = 5$ $x = -1, y = 0$ $x = 1.2, y = 1.4$

3. 字畫 (i), (ii) 是二元一次方程 $\begin{cases} x + y = 9 \\ 2x + y = 2 \end{cases}$ 的解。

代入 $x = 1, y = -1$
 $1 + (-1) = 0$ — ①

$3(1) + (-1) = -2$ — ②

∴ 兩式均符合, 0-1 是聯立方程的解 ✓

3 第五課 Chapter 5

下列各圖中, 哪一個是正確的?

(i) $\triangle ABC \sim \triangle DEF$ (ii) $\triangle ABC \sim \triangle DEF$

(iii) $\triangle ABC \sim \triangle DEF$ (iv) $\triangle ABC \sim \triangle DEF$

4 Quiz 4 Discussion

1. (a) 根據下列各方程, 完成表格。

$y = 3x - 1$ $3 = 3x - 1$ $9 = 3y$

x	1	3	4
y	2	8	11

$2x + y = 9$ $y = 9 - 2x$

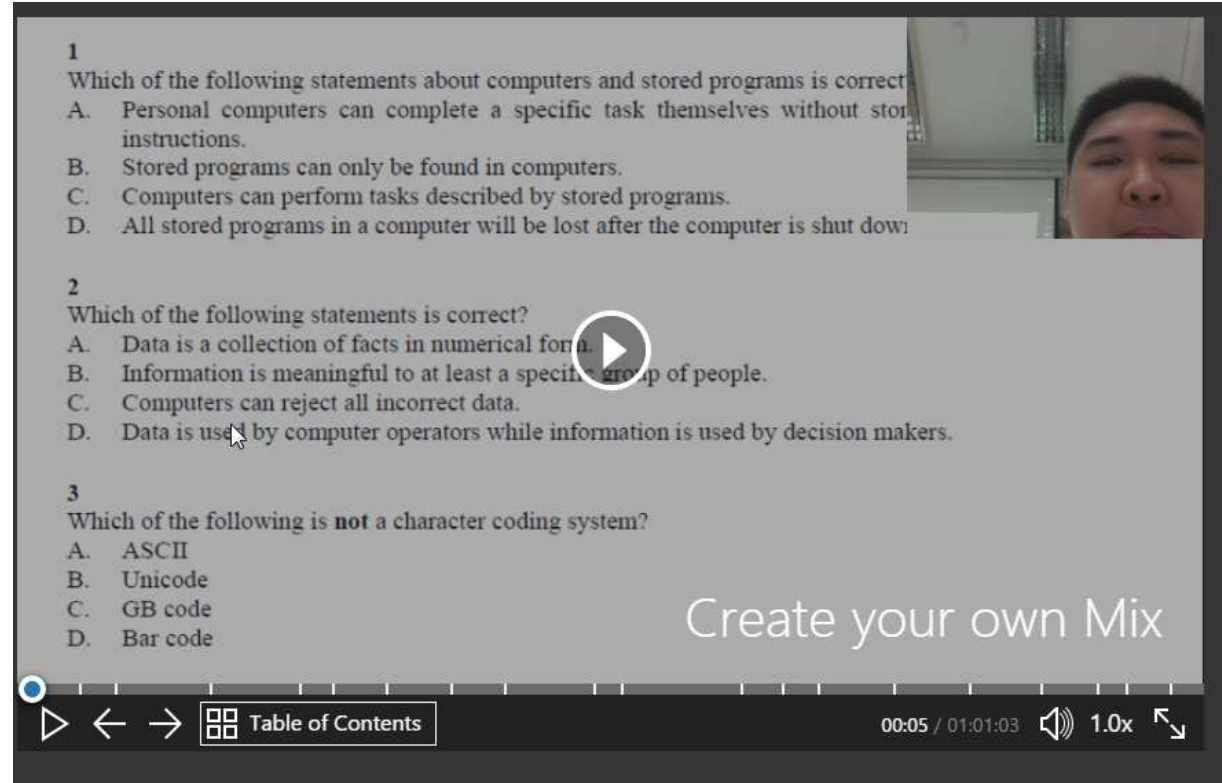
x	1	3	4
y	7	3	1

(b) 根據圖解, 解聯立方程 $\begin{cases} x - 3y = 1 \\ 2x + y = 9 \end{cases}$ (8分)

$x = 2, y = 5$

ICT Lesson with Office MIX

- Students search for video on our Moodle LMS
- For selfstudy



The screenshot shows a video player interface. The video content is a quiz with three questions. A play button is visible over the second question. The video player has a progress bar at the bottom with a 'Table of Contents' button and a timestamp of 00:05 / 01:01:03. The text 'Create your own Mix' is displayed in the bottom right corner of the video frame.

1
Which of the following statements about computers and stored programs is correct?

- A. Personal computers can complete a specific task themselves without stored instructions.
- B. Stored programs can only be found in computers.
- C. Computers can perform tasks described by stored programs.
- D. All stored programs in a computer will be lost after the computer is shut down.

2
Which of the following statements is correct?

- A. Data is a collection of facts in numerical form.
- B. Information is meaningful to at least a specific group of people.
- C. Computers can reject all incorrect data.
- D. Data is used by computer operators while information is used by decision makers.

3
Which of the following is **not** a character coding system?

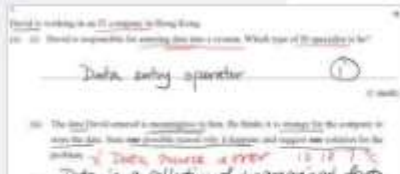
- A. ASCII
- B. Unicode
- C. GB code
- D. Bar code

Create your own Mix

00:05 / 01:01:03 1.0x

Table of Contents

ICT Lesson with Office MIX



SLIDE SUMMARY

6	6	1 m 38 s	5 m 10 s
Visitors	Views	Avg. time spent	Slide duration

- OfficeMix Statistics

Activity 2

Producing your resume

In this activity, you are going to write your resume using Microsoft Word. The resume should include your personal details. You are required to arrange the information properly by applying different text formatting features and paragraph proper:

Activity 3

Producing an advertising flyer

In this activity, we are going to produce an advertising flyer using Microsoft Word. You are required to insert images and clip art with specified character properties.



SLIDE SUMMARY

25	37	2 m 13 s	0 s
Visitors	Views	Avg. time spent	Slide duration

SLIDE SUMMARY

23	31	3 m 25 s	0 s
Visitors	Views	Avg. time spent	Slide duration

[more...](#)

Computer Lesson x Google Classroom



- Adopted Google Suite for Education in 2015
- Google Classroom Trial in 3/2016
- Computer Lesson as Pilot

Computer Lesson x Google Classroom



- Self directed learning and collaboration on Google Docs



Computer Lesson x Google Classroom



- Instant Feedback by Google Form





Computer Lesson – eTextbook Trial



小明希望可再有另一個選擇，試在互聯網上搜尋另一部電話的資料。

- Students can draw and write on e-textbook and submit answers through WiFi

			
	\$6120	\$6250	
型號	S7	i6	
屏幕尺寸	5 吋	6 吋	
屏幕解像度	1440 x 2560	2160 x 3840	
中央處理器 (CPU)	Quad-core 2.3 GHz	Dual-core 1.84 GHz	
內置儲存空間	4 GB RAM	2 GB RAM	
儲存空間	32 GB	64 GB	

Computer Lesson – eTextbook Trial



型號 S7

屏幕尺寸 5 吋

屏幕解像度 1440 x 2560

中央處理器 (CPU) Quad-core 2.3 GHz

內置儲存空間 4 GB RAM

儲存空間 32 GB


(請按 CTRL + F5 確保查看最新)

iPhone 7 Plus 香港行貨先達收機參考價

容量	亮黑色	黑色
32GB	\$5,820 (+232)	\$5,820 (+232)
128GB	\$6,500 (+112)	\$6,250 (-138)
256GB	\$7,300 (+312)	\$7,000 (-188)

(** 已更新即日價錢 **)

Submitted Example 1



型號 S7

屏幕尺寸 5 吋

屏幕解像度 1440 x 2560

中央處理器 (CPU) Quad-core 2.3 GHz

內置儲存空間 4 GB RAM

儲存空間 32 GB

型號 i6

屏幕尺寸 6 吋

屏幕解像度 2160 x 3840

中央處理器 (CPU) Dual-core 1.84 GHz

內置儲存空間 2 GB RAM

儲存空間 64 GB

Submitted Example 2

Computer Lesson – eTextbook Trial

			
	\$6120	\$6250	
型號	S7	i6	phone 7
屏幕尺寸	5 吋	6 吋	5.5
屏幕解像度	1440 x 2560	2160 x 3840	1920
中央處理器 (CPU)	Quad-core 2.3 GHz	Dual-core 1.84 GHz	2
內置儲存空間	4 GB RAM	2 GB RAM	3 GB
儲存空間	32 GB	64 GB	

Submitted Example 3

Advantage:

- Teachers can check instantly whether all students are submitted their answers
- Students are less likely to off task

Moodle System – Our in-house LMS

St. Joan of Arc Secondary School Moodle System

Home > Course > S1

NAVIGATION

Home

Site news

Courses

- S1
 - CHIN@S1
 - ENG@S1
 - MATH@S1
 - IS@S1
 - PTH@S1
 - CHIS@S1
 - GEOG@S1
 - HIST@S1
 - E&RE@S1
 - CL@S1
 - VA@S1
 - MUS@S1
 - PE@S1
 - M&S@S1
- S2
- S3
- S4
- S5
- S6
- All Levels

Course categories:

S1

Form 1 Student

Search courses: Go

中國語文 (S1)	①
English Language (S1)	①
Mathematics (S1)	①
Integrated Science (S1)	①
Putonghua (S1)	①
Chinese History (S1)	①
Geography (S1)	①
History (S1)	①
Ethics/ Religious Education (S1)	①
Computer Literacy (S1)	①
Visual Arts (S1)	①

Moodle System – Our inhouse LMS

Information & Communication Technology (S4)

Dashboard ▶ S4 ▶ ICT@S4

NAVIGATION

Dashboard

- Site home
- ▶ Site pages
- ▼ Current course
 - ▼ **ICT@S4**
 - ▶ Participants
 - ▶ Badges
 - ▶ General
 - ▶ Chp 01 - Introduction to Information Processing
 - ▶ Chp 02 - Data organization and data control
 - ▶ Chp 03 Number and character coding system
 - ▶ Chp 04 Multimedia Elements and Digitization
- ▶ My courses

ADMINISTRATION

- ▼ Course administration
 - ✎ Turn editing on
 - ⚙ Edit settings
 - ▶ Users
 - 👤 Unenrol me from ICT@S4
 - ▼ Filters
 - ▶ Reports
 - 📊 Grades



News forum

Chp 01 - Introduction to Information Processing

第一課 - 資訊處理簡介

- Chp 01 Self-Learning Video
- Chp 01 MC (ENG) Exercise
- Chp 01 MC (CHI) Exercise
- Test

Chp 02 - Data organization and data control

第二課 - 數據組織及數據控制

- Chp 02-1 Self-Learning Video
- Chp 02-2 Parity bit Self-Learning Video
- Chp 02 MC (ENG) Exercise

- Example of ICT

Moodle System – Our in-house LMS

BAFS (Business Management) (S4)

- Example of BAFS

Dashboard ► Courses ► S4 ► BAFS@S4

NAVIGATION

Dashboard

■ Site home

► Site pages

▼ Current course

▼ BAFS@S4

► Participants

► Badges

► General

► Chpt 1 香港營商環境

► 第二章企業擁有權類型

► Topic 3

► 1617 第一次統一測驗

► Topic 5

► Topic 6

► Topic 7

► Topic 8



公佈欄

Chpt 1 香港營商環境



影響企業商業決定的因素剪報



全球化功課Q27

答題技巧及參考答案



香港經濟發展iMoney (一帶一路)

有關一帶一路與香港經濟發展的關係



香港經濟評級

Moodle System – Our in-house LMS

Biology (S4)

Dashboard ► Courses ► S4 ► BIO@S4

NAVIGATION

Dashboard

■ Site home

► Site pages

▼ Current course

▼ **BIO@S4**

► Participants

► Badges

► General

► 第1章 生物學入門

► 第2章 生命分子

► 第3章 細胞組織

► 第4章 物質穿越細胞膜的活動

► 第5章 新陳代謝與酶

► 第6章 食物與人類

► 第7章 人的營養

► 第8章 人體的氣體交換

► 第9章 人體內物質的轉運

► 第10章 植物的營養與氣體交換

► 第11章 植物體內物質的轉運與支



News forum



中四級生物科習作資料夾文檔



中四級生物科第一次統一測驗試題及答案



校本評核預備實驗 - 紅菜頭組織水勢的測定

- Example of Biology

第1章 生物學入門

1.1 生物學是甚麼？	學生應 1. 知道生物學是甚麼。 2. 知道生物有哪些特徵。
1.2 生物學對人類的重要性	學生應能了解生物學對人類的重要性，並認識過去數百年間生物學上重要的發明及發現。
1.3 如何研習生物學	學生應 1. 認識研讀生物學所用的科學方法。 2. 理解何謂科學的本質。 3. 知道在實驗室進行實驗的安全守則。

Moodle System – Our in-house LMS

The screenshot displays the Moodle Question Bank interface. On the left, a sidebar contains navigation links: 'Data organization and data control', 'Qig 02 MC (2N3) Exercise', 'Question bank', and 'Questions'. The main content area is titled 'Question bank' and includes a 'Select a category' dropdown menu set to 'Qig 02E (15)'. Below this, there are checkboxes for 'Show question text in the question list', 'Also show questions from subcategories', and 'Also show old questions', along with a 'Create a new question' button. A list of questions is shown, including 'Question P02M001' and 'Question P02M002'. A preview window for 'Question P02M001' is open, showing the question text: 'John is asked to enter the name of a customer, Billy, into a database. However, he accidentally entered "P02M" instead. Which of the following types of errors has he made?'. The preview window also displays 'Select one' radio buttons for options A (Parity error), B (Data source error), C (Transcription error), and D (Transposition error). At the bottom of the preview window, there are buttons for 'Start again', 'Save', 'Fill in correct responses', 'Submit and finish', and 'Close preview'. Below the preview window, there are sections for 'Technical information', 'Attempt options', and 'How questions behave'.

- Making good use of Question Bank from Publisher
- Give Student more chance to practice

Moodle System – Our in-house LMS

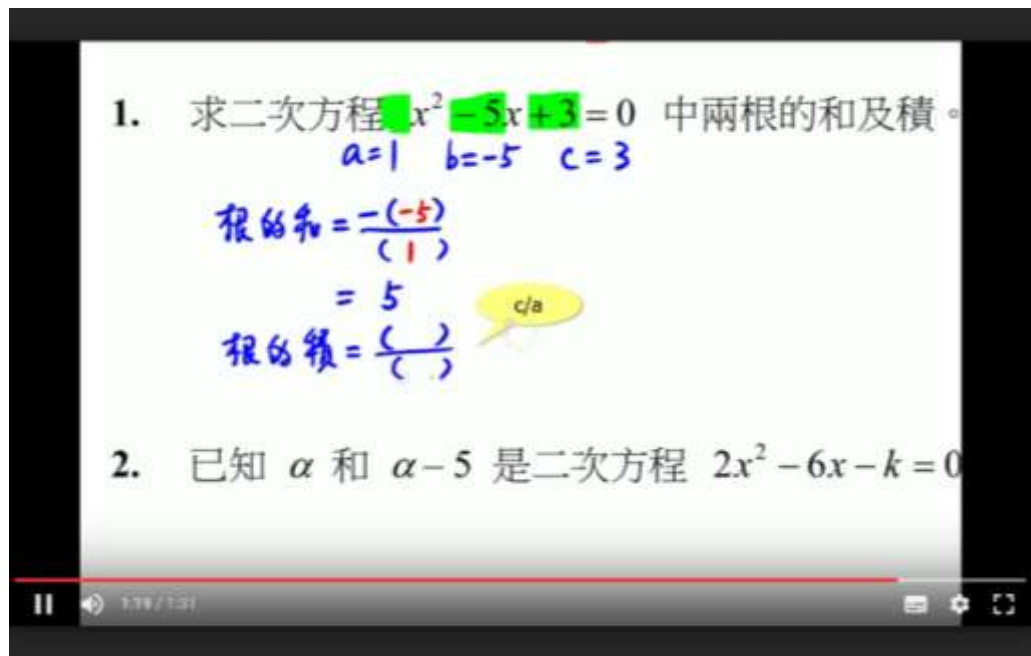
The screenshot displays a Moodle interface with a table showing student performance. The table has the following columns: First name / Surname, Email address, State, Started on, Completed, Taken, Grade, and 12 question scores (Q. 1 to Q. 12). The scores are represented by green checkmarks (correct) and red X marks (incorrect), with numerical values (0.67, 0.00, 0.33) indicating the score for each question. A large black redaction box covers the student names and email addresses.

First name / Surname	Email address	State	Started on	Completed	Taken	Grade	Q. 1	Q. 2	Q. 3	Q. 4	Q. 5	Q. 6	Q. 7	Q. 8	Q. 9	Q. 10	Q. 11	Q. 12
[Redacted]	[Redacted]						0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
[Redacted]	[Redacted]						0.67	0.67	0.00	0.67	0.67	0.67	0.00	0.00	0.00	0.67	0.00	0.00
[Redacted]	[Redacted]						0.00	0.67	0.67	0.67	0.67	0.00	0.67	0.67	0.67	0.00	0.00	0.00
[Redacted]	[Redacted]						0.67	0.67	0.67	0.00	0.67	0.00	0.00	0.67	0.00	0.00	0.00	0.00
[Redacted]	[Redacted]						0.67	0.67	0.67	0.67	0.67	0.00	0.67	0.00	0.00	0.00	0.00	0.00
[Redacted]	[Redacted]						0.00	0.67	0.67	0.67	0.67	0.00	0.67	0.67	0.00	0.00	0.00	0.00

- Students' performance on particular questions/topics are clearly shown
- Teachers can adjust their teaching pace accordingly

Moodle System – Our in-house LMS

- Example of Mathematics, use together with YouTube for Self Directed Learning



1. 求二次方程 $x^2 - 5x + 3 = 0$ 中兩根的和及積。
 $a=1$ $b=-5$ $c=3$

根的和 = $\frac{-(-5)}{(1)}$
 $= 5$

根的積 = $\frac{(3)}{(1)}$

2. 已知 α 和 $\alpha - 5$ 是二次方程 $2x^2 - 6x - k = 0$

The screenshot shows a video player interface with a red progress bar and standard controls at the bottom. A yellow speech bubble with the text 'c/a' points to the denominator of the product formula.

Moodle System – Our in-house LMS

- ICT as well!

E.g. 7 Convert 101011_2 into a hexadecimal no. 把 101011_2 轉換為十六進制數

$$\begin{array}{cc} 10 & 1011 \\ 0010_2 & 1011_2 \\ = 2_{16} & B_{16} \end{array}$$

$101011_2 = 2B_{16}$

6. A Hexadecimal Number to a Binary Number 由十六進制轉換為二進制

E.g. 8 Convert $A7_{16}$ into a binary no. 把 $A7_{16}$ 轉換為二進制數

$$\begin{array}{cc} A_{16} & 7_{16} \\ = 1010_2 & = 111_2 = 0111_2 \end{array}$$

Therefore 因此, $A7_{16} = 1010\ 0111_2$

E.g. 9 Convert $30D_{16}$ into a binary no. 把 $30D_{16}$ 轉換為二進制數

$$\begin{array}{ccc} 3_{16} & 0_{16} & D_{16} \\ = 0011_2 & = 0000_2 & = 1101_2 \end{array}$$

Therefore 因此, $30D_{16} = 0011\ 0000\ 1101_2$

55 / 11/16

Moodle System – Our in-house LMS

BAFS

ch10 複式記帳法基本概念及實例分... 單元10 複式記帳法



第一個會計功能
是**記錄**。

我可以怎樣記錄交
易事項呢？

0:13 / 12:06

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IS Field Trip with Google Classroom



IS Field Trip with Google Classroom

The screenshot displays the Google Classroom interface with three main sections. The top section shows an assignment titled 'HKZBG Visit worksheet 2' by C. Ngai, due on 29 Apr at 20:00. It includes instructions to choose 10 living things and create a key, with a progress bar showing 0/22 students completed. The middle section shows another assignment titled 'HKZBG Visit Worksheet' by C. Ngai, due on 29 Apr at 17:00, with instructions to use an online version, and a progress bar showing 15/7 students completed. The bottom section shows a post by C. Ngai dated 29 Apr with the text 'Hi Girls and Boys' and a message about a newsletter and video clip, with a progress bar showing 1/1 student completed. A red plus button is visible at the bottom right.

C. Ngai
28 Apr (Edited 29 Apr)

Due 29 Apr, 20:00

HKZBG Visit worksheet 2

Choose 10 living things (10 types of animals or 10 types of plants), write down their common name and take a picture by using mobile phone. Using the spaces provided, make a key (either flow key or tree key) to classify the 10 living things you have chosen.

1 attachment

0 / 22
DONE NOT DONE

Add class comment

C. Ngai
29 Apr (Edited 29 Apr)

Due 29 Apr, 17:00

HKZBG Visit Worksheet

This is the online version of worksheet, you can do it online instead of hardcopy

1 attachment

15 / 7
DONE NOT DONE

Add class comment

C. Ngai
29 Apr

Hi Girls and Boys

Today I get a newsletter about the last intact ocean on the earth: Ross Sea near New Zealand.

Please watch the video clip and know more about our environment...

1 attachment

Add class comment

C. Ngai

IS Field Trip

Back to Classroom

22:56

41%


Temperature (°C) *

Humidity (%) *

Record the information you have seen in the garden, and put the number in the spaces provided.

Mammals

Bornean Orang-utan



Number *

選擇

Where do you find them in the cage?

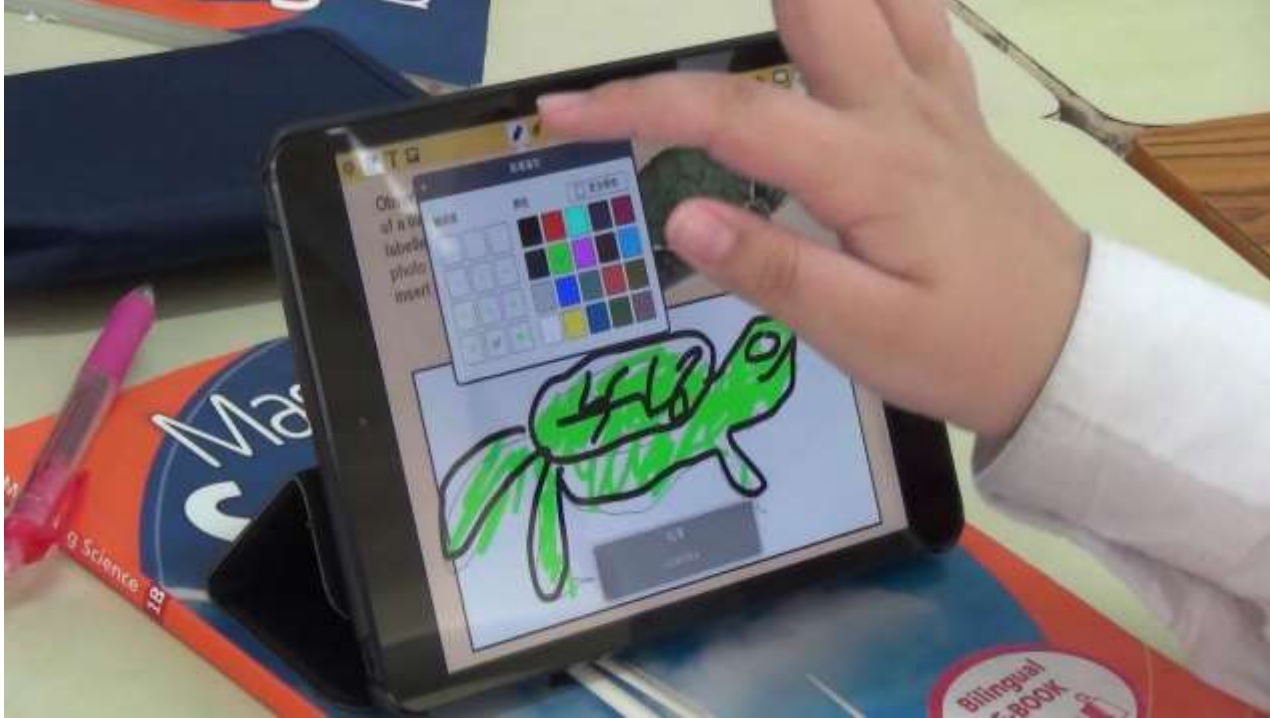
☐ Corner

☐ Inside Cave

Science Lesson – iClass



Science Lesson – iClass



- E-worksheet

Science Lesson – iClass



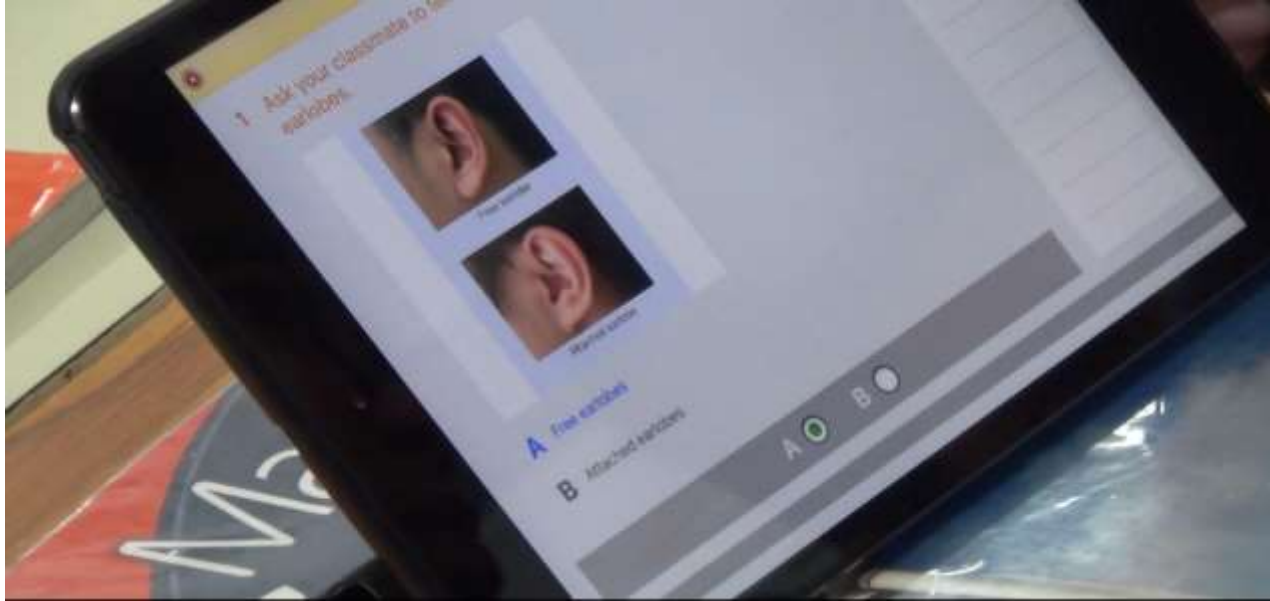
- Better Students Teacher Interactions

Science Lesson – iClass



- Better understand of students' individual progress

Science Lesson – iClass



- In class e-Assessment

iClass Training – Science Teachers



- iClass LMS training during IS panel meeting
- E-Pedagogy was discussed

Visual Arts Lesson – STEAM lesson



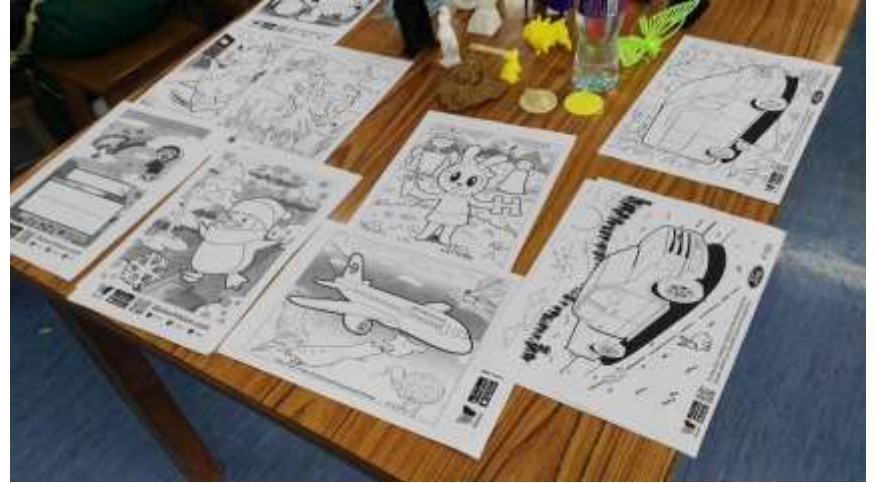
D&T + Art Design + 3D Printing +
Coding

Visual Arts Lesson x ICT x 3D Print



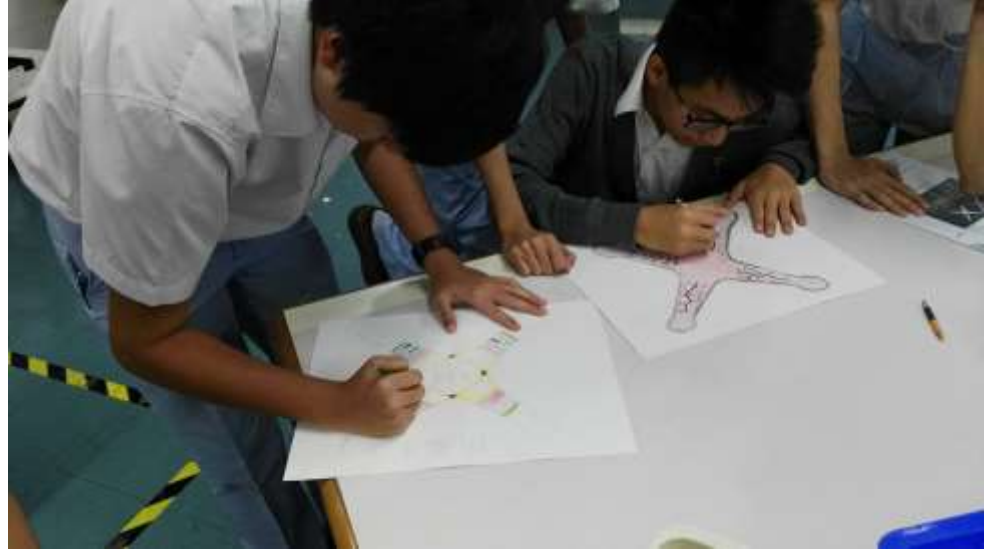
- Recorder with 3D printed mouth piece
- Students can design their mouth piece
- TinkerCad

Visual Arts Lesson x AR



- Students tasted AR technology during Visual Arts Lesson
- Theory is explained during ICT lesson

Visual Arts Lesson



- Art work are designed by students for Drones

Maker Space – STEAM Education



KungKao Pao interviewed our students about our latest STEAM education

News Coverage at Kung Kao Pao

公教報 3788期



聖貞德中學師生分享STEAM教育，左起校長鄭惠兒、教師鄭加略、學生吳梓禧和葉俊希、醫生施朗、教師馮德全。他們手執自製的牧童笛和四軸機。

[Previous](#) [Resume](#) [Next](#)



聖貞德中學自製牧童笛 鼓勵學生善用創新科技

刊登日期: 2016.09.23

標籤連結: [教育](#)



《本報訊》聖貞德中學推出「STEAM跨學科教育」，讓學生在常規課程融入科技與創作元素，包括設計及製作牧童笛和四軸航拍機等，激發學生想像力。

聖貞德中學剛於上學年在初中二級完成跨科協作，在視覺藝術科和音樂科製作牧童笛，作為「STEAM跨學科教育」（STEAM為綜合科學、科技、工程、美術及數學的英文縮寫）試點。學校本學年正式成立「STEAM教育」小組，在初中一至中三級五個學科（綜合科學、數學、電腦、音樂、視覺藝術）開展跨科協作。

新設「STEAM教育」小組

九月十三日該校師生接受本報訪問，「STEAM教育」小組的藝術統籌教師鄭加略說，學生以科學探究角度製作牧童笛，包括學習用3D軟件設計笛頭的吹嘴，以膠燈喉作笛身，再以數學計算音孔位置，使用鑽床在笛身鑽孔，並借助立體打印機印製吹嘴及美化牧童笛，製成後試吹及調音，並於音樂課中吹奏樂曲。

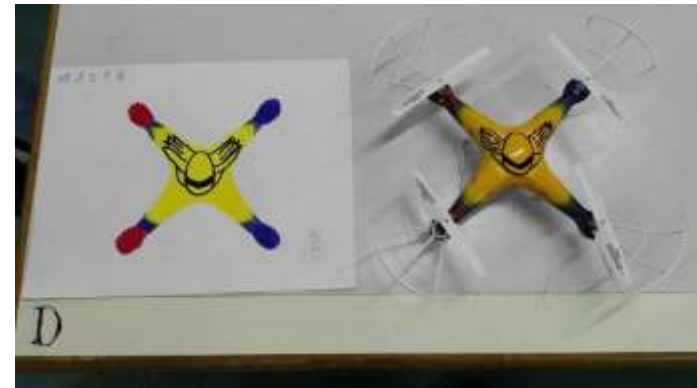
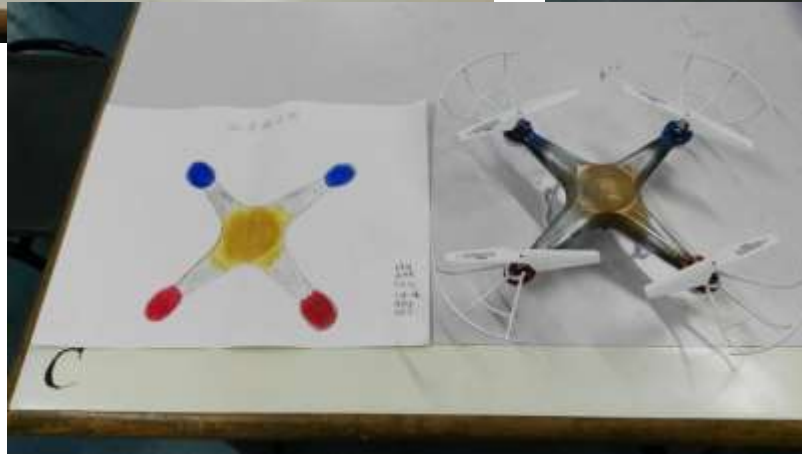
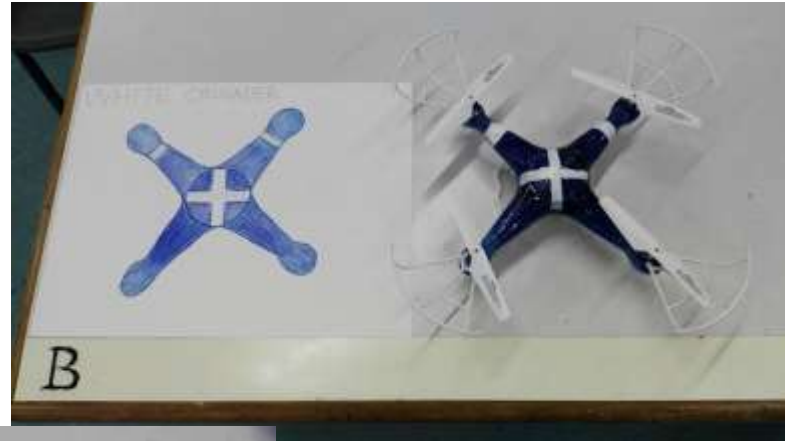
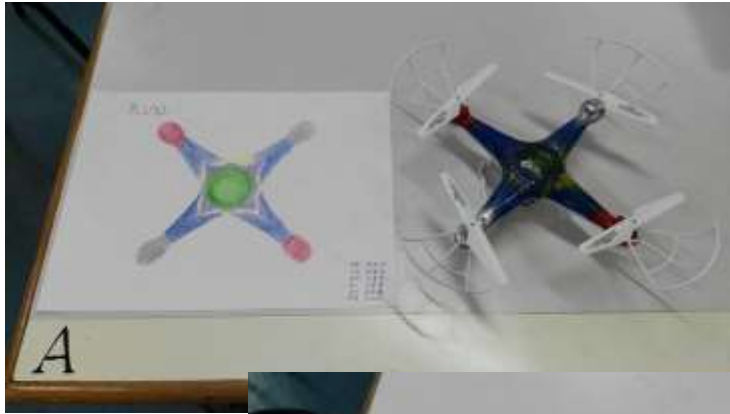
鄭加略說：「學生製作獨一無二的牧童笛，更可用於音樂課堂及考試上，能提升他們學習牧童笛的動力。」他期望在校內營造「創客空間」（Maker Space），把學生的創新意念實踐，培育成為「創客」（又譯自造者）。

跨科協作亦包括其他機械項目，例如中一級學習mBot機械人編程訓練；中二級在電腦科製作風力小車、電腦科與音樂科協作教授跳舞機械人；中三級配合數學及電腦科學習全息投影技術及原理，製作四軸航拍機等。

Maker Space – STEAM Education



Maker Space x Drones



Our Drones

Maker Space x Drones



Students enjoyed assembling their own drones

Maker Space x Drones

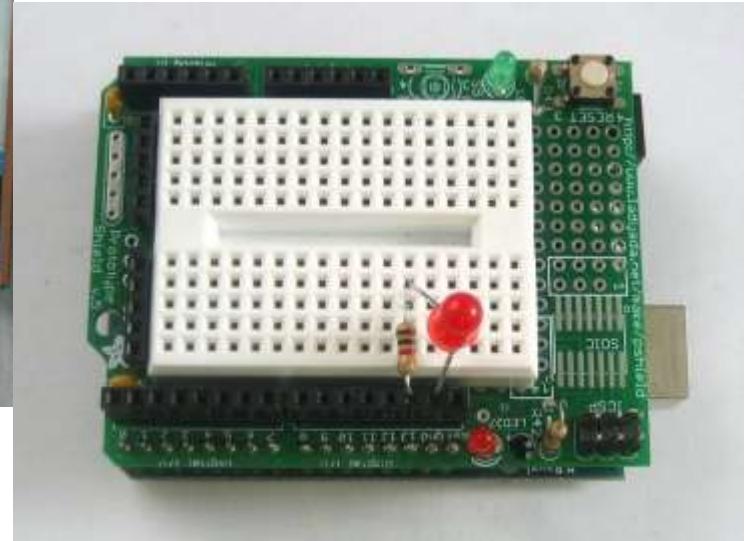
- Test flight!



Maker Space x Japanese School Visit



- Showed how to teach coding with Arduino board



Maker Space x Japanese School Visit



- Simple Cross Platform Coding Interface and traditional C style coding are available
- Program the digital / analog signal pins



Maker Space x Japanese School Visit



- Arduino is fun to work with



mBot Coding Workshop x Enriched IT Activities



- We organized private and public mBot workshop for our students and community

3D Printing + AR Workshop X Enriched IT Activities



- We organized 3D Printing and AR Workshop for our community

The left photograph shows a student in a white shirt and glasses looking intently at a 3D printer. The printer is on a shelf with a yellow control box. A warning sign on the shelf reads: "未得有關老師批准，同學不得擅動此設備" (Without the approval of the relevant teacher, students shall not tamper with this equipment). The right photograph shows a teacher in a light blue shirt presenting to a class. A presentation slide titled "3D 打印流程之簡述" (Brief description of the 3D printing process) is displayed on the screen. The slide lists the following steps: 1. 建模 / 建模 (Modeling / Modeling), 2. 切片 / 切片 (Slicing / Slicing), 3. 打印 / 打印 (Printing / Printing), and 4. 後處理 / 後處理 (Post-processing / Post-processing). The teacher is holding a microphone and pointing at the screen. Several students are seated at a table in the foreground, looking towards the teacher.

