

## Knowing More About IT in Primary Schools

### Application Form

小學奇趣 IT 識多啲計劃

申請表格

*This Application Form serves as a sample template for the “Centum x HoC AI workshop”. If you wish to apply for this activity, please submit the application online in our thematic portal at the following URL:*

[https://www.it-lab.gov.hk/tc/application\\_guideline\\_know-it.php](https://www.it-lab.gov.hk/tc/application_guideline_know-it.php)

#All fields are mandatory unless otherwise stated.

#除非特別註明，否則所有項目均須填寫。

### Part A : Particulars of the Applicant School

甲部：申請學校資料

1. School Name : (English)  
學校名稱： (英文)

(Chinese)  
(中文)

2. School Code:  
學校編號：

3. School Type :  
學校類別：

4. School Address : (English)  
學校地址： (英文)

(Chinese)  
(中文)

5. School Website :  
學校網址：

6. School Principal :  
校長：

(English)  
(Surname)  
(英文)  
(姓氏)

(First name)  
(名字)

(Chinese)  
(optional)  
(中文)  
(可選填)

**7. Telephone**

**Number :**

電話號碼 :

**Fax**

**Number :**

傳真號碼 :

**9. Email Address (<\*.edu.hk> or <\*.edb.gov.hk> preferred) :**

電郵地址 (建議使用<\*.edu.hk>或<\*.edb.gov.hk>) :

**10. Teacher-in-charge :**

負責教師 :

**(English)**  
**(Surname)**  
(英文)  
(姓氏)

**(First name)**  
(名字)

**(Chinese)**  
**(optional)**  
(中文)  
(可選填)

**11. Post :**

職位 :

**12. Telephone**

**Number :**

電話號碼 :

**13. Fax Number :**

傳真號碼 :

**14. Email Address (<\*.edu.hk> or <\*.edb.gov.hk> preferred) :**

電郵地址 (建議使用<\*.edu.hk>或<\*.edb.gov.hk>) :

**15. Correspondence Email (if different from the above) :**

聯絡電郵地址 (如與以上不同) :

## Part B : Annual Plan (2023/24 School Year)

### 乙部：年度計劃書（2023/24 學年）

#### I. IT-related activities (extra-curricular activities or co-curricular activities) 與資訊科技相關的活動（課外活動或聯課活動）

*Please describe the IT-related activities going to be held for your students.*

*請說明將為學生舉辦的資訊科技相關活動。*

*This programme provides a funding grant of up to \$400,000 to each publicly-funded primary school for organising IT-related extra-curricular activities to enhance primary school students' interest, knowledge and application of IT, so as to prepare for integration into a knowledge-based economy and digital society in the future. The school is required to use the procured equipment in organising activities for students to learn IT. When designing the activities, please make sure the learning objectives attribute to the learning of IT knowledge, theory and/or relevant practical skills involving exercising knowledge and practice of the IT, such as artificial intelligence, and robotic coding, etc. instead of the perspective of merely an IT user or making use of IT in teaching.*

本計劃向每所公帑資助小學提供最高 40 萬元的資助，以舉辦提升小學生對資訊科技的興趣、知識及應用的課外活動，為將來融入知識型經濟和數碼社會發展早作準備。學校必須使用購置的設備舉辦活動，以供學生學習資訊科技。在設計活動時，請確保學習目標應以學習資訊科技知識、理論及／或相關實用技能為主，包括運用和實踐資訊科技的知識，例如人工智能、機械人編程等，而非單從資訊科技用家的角度設計體驗活動或應用資訊科技於教學。

#### IT-related activities 與資訊科技相關的活動

(a) **Item Number :**

編號：

(b) **Title :** (English) **Centum Charitas Foundation x HoC AI Coding Class**  
名稱： (英文)

(Chinese) **百仁基金 x Hour of Code 小學 AI 編程班**  
(中文)

(c) **Description (including background, scope, list of activities, how the students are engaged in the activity, would parent also join, plan and schedule (if any)):**

活動說明（包括背景、範圍、活動列表、學生如何參與該活動、家長是否也會參加、計劃及時間表（如有））：

The classes are focused on basic coding techniques using micro:bit and block-based programming. It will also go through the use of micro:bit as physical computing, bridging software and hardware. This also go through the process of programming, debugging and calibrating when errors are

found in coding. As the technology evolves, we encourage the students to further study by themselves after they completed the basic classes. It helps to make the AI learning in a sustainable way.

OR/或

本課程著重於使用 **micro:bit** 和基於積木程式設計的基礎編碼技術。將使用 **micro:bit** 作為實體運算、連接軟體和硬體。當編碼中發現錯誤時，學生將經歷編程、調試和校準的過程。隨著科技的發展，我們鼓勵學生在完成基礎課程後繼續自學。它有助於使人工智慧學習以可持續的方式進行。課程鼓勵家長與學生一起參加手工製作工作坊。他們可以了解人工智慧趨勢以及學生如何從課程中學到什麼。

**(d) Technology :**

科技：

- Artificial Intelligence (AI) 人工智能
- Big Data 大數據
- Blockchain 區塊鏈
- Cloud Computing 雲端運算
- Coding / Algorithm 編程／演算法
- Computational Thinking 運算思維
- Cyber Security 網絡安全
- Digital Game Design and Development 數碼遊戲設計與開發
- Drone Coding 無人機編程
- IoT Coding 物聯網編程
- Mobile App Development 流動應用程式開發
- Robotics Coding 機械人編程
- Virtual Reality (VR) / Augmented Reality (AR) 虛擬實境／擴增實境
- Web Development 網站開發
- Others, please specify 其他，請註明：\_\_\_\_\_
- N/A 不適用

**(e) Objective / Primary Intended Outcome (max 5):**

目標／主要預期成果（最多五項）：

- Cultivate students' interest in IT and foster an IT learning atmosphere at school 培養學生對資訊科技的興趣並在學校營造學習資訊科技的氛圍
- Enable students to keep abreast of new technologies 讓學生了解新科技的最新發展
- Enable students to understand further study in IT 讓學生了解資訊科技相關的進修資訊
- Broaden students' exposure to the IT industry and career 擴闊學生對資訊科

技行業及職業的認識

- Enhance student's computational thinking skills 增強學生的運算思維技巧
- Enhance student's ability to apply the IT knowledge and skills learnt 增強學生應用所學的資訊科技知識及技能的能力
- Foster student's innovative abilities 培養學生的創新能力
- Solicit the support from parents for their children to further study or pursue a career in IT or as tech entrepreneurs 獲取家長支持其子女進修資訊科技學科或投身資訊科技行業，或成為科技創業家
- Enrich students' learning experience e.g. competitions, visits, project learning, etc. 豐富學生的學習經驗，例如參與比賽、參觀、專題研習等
- Others, please specify 其他，請註明： \_\_\_\_\_

Further elaboration 進一步闡述：

#### **Lesson 1 (3 hours) Basic**

- Introduction of Computational Thinking and up-to-date Physical Computing technology
- Introduction of micro:bit and Makecode
- Basic function : Input/output of micro:bit
- Variable and Loops - make a step counter
- Conditions (If-then-else) – example : Rock, Paper & Scissors
- Make a compass
- Light sensor & music player
- Make a Thermometer
- Radio Communication and Morse Code
- Remote control device – Remote car demo

#### **Lesson 2 (3 hours) Intermediate**

- Physical project implementation w/ micro:bit
- Extension board - basic:bit and Concept of GPIO (General Purpose Input/Output)
- Add Extension in Makecode
- Make a rainbow LED strip (usage of extension & GPIO)
- micro:bit PINs Usage : Concept of Analog & Digital signal
  - ✓ Control the LED on/off (Digital signal)
  - ✓ Control the brightness of LED (Analog signal)
- Soil Moisture sensor to switch on the LED and extend to a water pump for automatic watering system
- PIR Motion sensor to control the servo motor
- Traffic Gate simulation (LIVE project making)

#### **Lesson 3 Practical**

**(parents optional to join, 3 hours)**

- Introduction of AI technology in our daily lives

- Make an AI Light w/ voice recognition module
- Introduction of Wukong extension board and accessories
- Basic functions (w/o external sensors)
  - ✓ Use micro:bit buttons and touch sensors to change different light signals and music
  - ✓ Use different input value (light, volume & temperature to change different light signals)
- Advanced functions (IOT & AI Technology)
  - ✓ Change different light signals through the broadcast function
  - ✓ Expand the voice module to control lights with customized commands (AI voice-controlled lights)
  - ✓ Design solutions to everyday problems through expanded voice modules + programs
  - ✓ Add a sense of technology to life through expanded voice module + MP3 module (AI music playback atmosphere light)

OR/或

### 第 1 課 (3 小時) - 基礎課程

- 介紹運算思維和最新的實體運算技術
- micro:bit 和 Makecode 簡介
- 基本功能：micro:bit 輸入/輸出
- 變數與迴圈 - 製作計步器
- 條件運用 (If-then-else) - 例：包剪揀遊戲
- 製作指南針
- 光感應器和音樂播放器
- 製作一個溫度計
- 無線電通訊與摩斯電碼
- 遙控技術設備介紹 - 遙控車示範

### 第 2 課 (3 小時) - 進階課程

- 使用 micro:bit 製作實體項目
- 擴充板 - micro:bit 和 GPIO (通用輸入/輸出) 的概念
- 在 Makecode 中加入擴展包
- 製作彩虹 LED 燈條 (使用擴充包和 GPIO)
- Micro:bit PIN 用法：類比和數位訊號的概念
  - ✓ 控制 LED 開/關 (數位訊號)
  - ✓ 控制 LED 的亮度 (類比訊號)
- 土壤濕度感測器開啟 LED 並延伸至自動澆水系統的水泵

- PIR 動作感測器控制伺服電機
- 模擬交通閘門 (LIVE 專案製作)

### 第 3 課 (3 小時)- 實踐課程

(家長可選擇參加)

- 將人工智慧技術引入我們的日常生活
- 製作帶有語音辨識模組的人工智慧燈
- Wukong 擴充板及配件介紹
- 基本功能 (無需外部感測器)
  - ✓ 使用 micro:bit 按鈕和觸控感應器來改變不同的燈光訊號和音樂
  - ✓ 使用不同的輸入值 (光、音量和溫度) 來改變不同的燈光訊號
- 進階功能 (物聯網與人工智慧技術)
  - ✓ 透過廣播功能改變不同的燈光訊號
  - ✓ 擴充語音模組, 實現自訂指令控燈 (AI 聲控燈)
  - ✓ 透過擴展語音模組 + 程式設計日常問題的解決方案
  - ✓ 透過擴展語音模組 + MP3 模組 (AI 音樂播放氣氛燈) 為生活增添科技元素

(f) **Other Intended Outcome (if any) (max 5): 其他預期成果 (如有) (最多五項) :**

(i) Enhance students' non-technical ability : 增強學生的非技術能力 :

Creativity and innovation 創意與創新

Communication skills 溝通技巧

Presentation abilities 表達能力

Problem solving skills 解難能力

Critical thinking 批判性思考

Learning attitude 學習態度

Self-learning skills 自學技巧

Collaboration skills 合作技巧

Cross-disciplinary skills 跨學科技能

Self-initiative 自發性

Others, please specify 其他, 請註明: \_\_\_\_\_

(ii) Others 其他 :

Contribution to the school community 對學校社群作出貢獻

Contribution to the local community 對本地社區作出貢獻

Others, please specify 其他, 請註明: \_\_\_\_\_

(g) **Estimated Number of Participating Students :**  
預計參與學生人數 :

**No. of P4-P6 students :**

\_\_\_\_\_  
Please provide the details of the target beneficiary students (e.g. P1 – P3: 100, P4 – P6: 50, etc.) :

請提供受惠學生的詳細資料 (如小一至小三 : 100、小四至小六 : 50 等) :

(h) **Estimated Activity Period :**  
預計活動日期 :

\_\_\_\_\_  
**From (mmm/yyyy) 由 (月/年) :**

\_\_\_\_\_  
**To (mmm/yyyy) 至 (月/年) :** \_\_\_\_\_  
(將開設課程至 2023/24 學年)

(i) **Estimated Number of Activity Hours in this School Year** 本學年活動的預計時數 (小時) : **9 x No. of classes**

(j) **Mode of Delivery** 推行模式 :

Delivered by the school only 只由學校推行

Jointly delivered by the school and external parties 由學校與以下伙伴共同推行 :

Academia 學術界 \_\_\_\_\_



- IT Industry 資訊科技業界\_\_\_\_\_
  - Professional Associations 專業協會\_\_\_\_\_
  - NGO 非政府機構 **Centum Charitas Foundation 百仁基金**
  - Others, please specify the type and name 其他，請註明機構類型及名稱：\_\_\_\_\_
  - Mainly delivered by external parties (e.g. outsourcing) 主要由以下伙伴推行（例如外判）
    - Academia 學術界\_\_\_\_\_
    - IT Industry 資訊科技業界\_\_\_\_\_
    - Professional Associations 專業協會\_\_\_\_\_
    - NGO 非政府機構\_\_\_\_\_
    - Others, please specify the type and name 其他，請註明機構類型及名稱：\_\_\_\_\_ **Hour of Code Hong Kong 一小時編程香港**\_\_\_\_\_
- If the activity is mainly delivered by external parties, please provide the role of the school in delivery and the reasons :  
 如果活動主要由伙伴推行，請提供學校在推行方面所擔當的角色及原因：

**(k) Activity Type : 活動類型 :**

- Learning activities 學習活動
  - Organise workshop 舉辦工作坊
  - Organise maker session 舉辦創客活動
  - Organise seminar/webinar/lesson 舉辦研討會／網上研討會／課堂
  - Organise short course/training 舉辦短期課程／培訓
  - Attend external workshop 參與由外界舉辦的工作坊
  - Attend external maker session 參與由外界舉辦的創客活動
  - Attend external seminar/webinar/lesson 參與由外界舉辦的研討會／網上研討會／課堂
  - Attend external short course/training 參與由外界舉辦的短期課程／培訓
  - Others, please specify 其他，請註明：\_\_\_\_\_
- Competition 比賽
  - Organise intra-school competition 舉辦校內比賽
  - Organise local inter-school competition 舉辦本地校際比賽
  - Organise non-local inter-school competition (Mainland) 舉辦非本地校際比賽（內地）

Organise non-local inter-school competition (International) 舉辦非本地校際比賽（國際）

Attend local competition 參加本地比賽

Attend non-local competition (Mainland)參加非本地比賽（內地）

Attend non-local competition (International)參加非本地比賽（國際）

Others, please specify 其他，請註明：\_\_\_\_\_

#### Competition Type 比賽類型

IT knowledge 資訊科技知識

Coding 編程

Mobile app 流動應用程式

Robotics 機械人

Digital game design 數碼遊戲設計

Hackathon 編程馬拉松

Datathon 數據馬拉松

Pitching 商業企劃競賽

Innovative solutions / prototype 創新方案／原型開發

Others, please specify 其他，請註明：\_\_\_\_\_

- Exhibition / Expo / Conference / Symposium / Open day 展覽／博覽會／討論會／座談會／開放日

Organise intra-school exhibition / expo / conference / symposium / open day 舉辦校內展覽／博覽會／討論會／座談會／開放日

Organise inter-school exhibition / expo / conference / symposium / open day 舉辦校際展覽／博覽會／討論會／座談會／開放日

Attend exhibition / expo / conference / symposium 參與展覽／博覽會／討論會／座談會

Others, please specify 其他，請註明：\_\_\_\_\_

- Visit 參觀

Visit to local IT organisations (\_\_\_\_\_) for students 安排學生參觀本地資訊科技機構

Local field trip in support of the IT-related activities 支援與資訊科技相關的活動的本地實地視察

Others, please specify 其他，請註明：\_\_\_\_\_

- Others 其他

Please specify 請註明：\_\_\_\_\_

(l) **Deliverables that can be shared with other schools upon completion** 活動完成後可與其他學校分享的成果：

- **Teaching Materials** 教材

- Presentation slides 簡報投影片
- Worksheets 工作紙
- Sample codes 範例程式碼
- Teaching notes / videos 教學大綱／短片
- Others, please specify 其他，請註明：  
\_\_\_\_\_

- **Work of Students** 學生作品

- Presentation slides 簡報投影片
- Images 圖像
- Videos 短片
- Others, please specify 其他，請註明：  
**Projects/ Competition related works/項目和競賽作品相關資料**

- **Records of Activities** 活動記錄

- Photos 相片
- Videos 短片
- Others, please specify 其他，請註明：  
\_\_\_\_\_

**Details of the deliverables to be shared with other schools** 可與其他學校分享的成果之詳細資料

- **Works sharing workshop, experiences sharing with schools**
- **Microbit/ AI works creation inspiration and ideas sharing**
- **舉行簡介會與其他學校分享他們的經驗**
- **一些學生學習機械人(micro:bit)/ 人工智能項目或發明的故事**

(m) **Other Relevant Details (if any)** 其他相關資料（如有）

## II. Cost of IT-related activities 與資訊科技相關的活動費用

*The funding under this programme can only be used to organise IT-related extra-curricular activities and procure IT equipment, infrastructure and related services which are necessary and directly related to the proposed IT-related activities. Generally speaking, the funding for the procurement of IT equipment, infrastructure and related services should not be more than **\$200,000** during the entire programme period. Schools should provide clear and concrete justifications on any expenditure in procuring IT equipment, infrastructure and related services, and explain why such expenditure is required for the proposed IT-related activities. Schools should also provide specific plans on how to fully utilise the IT equipment, infrastructure and related services (such as organising more IT-related activities) within the scope of the Knowing More About IT in Primary Schools programme.*

本計劃的資助只可用於舉辦與資訊科技相關的課外活動，及購置擬舉辦的資訊科技相關活動需要及直接相關的資訊科技設備、基礎設施及相關服務。一般而言，在整段計劃期內，購置資訊科技設備、基礎設施及相關服務的資助不能多於 **20萬元**。學校應就購置任何關乎資訊科技設備、基礎設施及相關服務等的費用提供清晰的實質理據，解釋何以擬舉辦與資訊科技相關的活動需要該等支出，並就如何在「小學奇趣 IT 識多啲」計劃資助範圍內充分利用該等設備、基礎設施及相關服務（例如進行更多與資訊科技相關的活動），提供具體方案。

### **(a) IT Equipment, Infrastructure and Related Service Charges 資訊科技設備、基礎設施及相關服務費用**

*Please describe the hardware, software, infrastructure, cloud services and other items that will be acquired in organising the proposed IT-related activities. The applicant has to provide justifications in the description below showing how the procured IT equipment and professional services will be utilised to organise suitable IT-related activities.*

*請說明為擬舉辦的資訊科技相關活動而購置的硬件、軟件、基礎設施、雲端服務及其他項目。申請人必須在以下說明一欄提供理由，述明如何運用所採購的資訊科技設備及專業服務舉辦合適的資訊科技相關活動。*

<b>Item No. 編號</b>	<b>Expenditure Item 開支項目</b>	<b>Description and Justification (including high level specification, estimated quantity to be procured,</b>	<b>Estimated Amount (2023/24) (Ballpark in HK\$) 估計金額 (2023/24) (港幣)</b>	<b>Related Professional and Maintenance Services (2023/24) (Ballpark in HK\$) 相關專業及</b>	<b>Activity Item Number (optional) 活動編號 (可選填)</b>	<b>Remarks (optional) 備註 (可選填)</b>	<b>Other Source of Funding, including estimated amount, if any (optional) 其他資助</b>
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		etc.) 說明及理由 (包括規格、估計購買數量等)		維修保養服務 (2023/24) (港幣)			來源，包括估計金額(如有) (可選填)
1	Hardware 硬件	micro:bit v2 Starter Kit	\$155x 20 (x Number of classes to conduct)  or  \$155 x 20 (x Number of students to attend)				
2	Hardware 硬件	micro:bit sensor pack	\$240 x 20				
3	Hardware 硬件	AI light learning kit	\$640 x 20				
<b>Total 總計：</b>			<b>\$20,700</b>				

**(b) Operating Expenses and Administrative Cost 營運開支及行政費用**

*Please describe the operating expenses and administrative cost that will be required in organising the proposed IT-related activities. The applicant has to provide justifications in the description below showing how the expenses are related in and necessary for organising suitable IT-related activities.*

請說明為擬舉辦的資訊科技相關活動所需的營運開支及行政費用。申請人必須在以下說明一欄提供理由，述明有關開支如何與舉辦合適的資訊科技相關活動有關並且是必需的。

Item No. 編號	Expenditure Item 開支項目	Description and justification 說明及理由	Estimated Amount (2023/24) (Ballpark in HK\$) 估計金額 (2023/24) (港幣)	Activity Item Number (optional) 活動編號 (可選填)	Remarks (optional) 備註 (可選填)	Other Source of Funding, including estimated amount, if any (optional) 其他資助來源，包括估計金額(如有) (可選填)
1	由百仁基金安排導師助教授課，每次課程（9小時）\$24,300 (x Number of classes to conduct)					
2						
3						
<b>Total</b> 總計：						

### III. Budget 預算

- (a) The estimated budget in 2023/24 school year is summarised as below. 2023/24 學年預算費用的摘要如下：

#### Estimated Budget 預算費用

	<b>Estimated Budget in 2023/24 school year (Ballpark in HK\$) 2023/24 學年預算費用 (港幣)</b>
<b>A. IT Equipment and Related Service Charges (Part B II(a))</b> 資訊科技設備及相關服務費用 (乙部 II (a))	
Hardware : 硬件：	
Software : 軟件：	
Cloud Services : 雲端服務：	
Infrastructure : 基礎設施：	
Others: 其他：	
Sub-total : 小計：	
<b>B. Operating Expenses and Administrative Cost (Part B II(b))</b> 營運開支及行政費用 (乙部 II (b))	
Sub-total : 小計：	
<b>Total (A + B) :</b> 總計 (A + B)：	

**IV. Additional Information (e.g. relevant school background, vision) 其他資料**  
(例如相關學校背景、願景)

**Plans to rerun the proposed activities if the funding is approved 如果資助獲得批准，**

**任何重新推行擬舉辦活動的計劃**

If there is any additional information that the school wishes to submit for the OGCIO's reference (which will not form part of the application), please include a separate file (.pdf, .doc, .docx, .rtf, .jpg, .jpeg, .png, .zip) of not more than 10MB. For document file, it should contain not more than 4 pages with font size of at least 12pt. Please upload in zip format for multiple files.

如學校希望提交任何其他資料供資料辦參考（不構成申請的一部分），請另加一個不超過 10MB 的檔案(.pdf, .doc, .docx, .rtf, .jpg, .jpeg, .png, .zip)。文件檔不應超過四頁，字體大小為 12pt 或以上。如需上載多個檔案，請以 zip 檔案格式提交。