

**My Digital Bootcamp Project Overview**

<b>Project Name</b>	My Digital Bootcamp Season 3
<b>Objective of Project</b>	<p>To allow children from disadvantaged backgrounds to learn new digital-making skills through:</p> <ul style="list-style-type: none"> <li>• Thematic Storylines</li> <li>• Modular Skills-Based Workshops</li> <li>• Home-Based Learning</li> <li>• Hackathon</li> </ul>
<b>Who Can Benefit?</b>	<p>Open to children in Central Singapore district who are:</p> <ul style="list-style-type: none"> <li>• Singaporean or Permanent Resident</li> <li>• 10 to 12 years old (or in Primary 4, 5, or 6)</li> <li>• From families with total household monthly income of S\$6,900 &amp; below, or S\$1,725 &amp; below per family member</li> </ul>
<b>Project Period</b>	March to December 2023
<b>Application Process</b>	<p>Students must be nominated by their school or organisation.</p> <p>Interested primary schools and community organisations with children from lower-income families in Central Singapore District can write to Mr Qamar Firdaus or Ms Melissa Lim at <a href="mailto:PA_CentralSingapore@pa.gov.sg">PA_CentralSingapore@pa.gov.sg</a>.</p>
<b>Sponsor &amp; Amount</b>	<p>S\$500,000 for My Digital Bootcamp Season 3, sponsored by UOB.</p> <p>Total Sponsored Amount: S\$1.5 Million</p>

## News Release

ANNEX B

### MY DIGITAL BOOTCAMP 2023 FACTSHEET

#### **WHY MY DIGITAL BOOTCAMP?**

In the current digital landscape, children build strong digital literacy and computational thinking skills through various learning opportunities. These include enrichment classes and camps provided for by the school, and holiday programmes which the parents/guardians enrol the child in.

**My Digital Bootcamp** provides children from disadvantaged backgrounds with access to similar digital learning opportunities.

This is one of the initiatives under Central Singapore CDC's SkillsFuture Junior movement. Children from disadvantaged backgrounds are equipped with relevant 21<sup>st</sup> century skills. This movement complements the long-term national SkillsFuture efforts: to give Singaporeans from all walks of life the opportunity to develop skills relevant to the future.

#### **WHAT IS MY DIGITAL BOOTCAMP (SEASON 3) AND HOW IS IT CONDUCTED?**

My Digital Bootcamp is an experiential and hands-on day camp that **equips children with digital-making skills** and allows children to **understand the current digital landscape**.

In the third iteration of My Digital Bootcamp i.e. My Digital Bootcamp (Season 3), children will be exposed to all-new digital-making skills and storylines. Children will go through one of these storylines: ***Space Time Adventure***, or ***Heroes of Planet Earth (HOPE)***.

Each child will deepen their learning and be equipped with **4 different digital-making skills** and receive a specially curated **home-based learning (HBL) Digital-Making Kit**, complete with a **learning management system**.

At the end of the season, children can look forward to a Hackathon, where they can solve real-life scenario-based challenges through a competition format.

**SUMMARY OF MY DIGITAL BOOTCAMP STORYLINES**

<b>SPACE-TIME ADVENTURE</b>	<b>HEROES OF PLANET EARTH (HOPE)</b>
<p><i>"In a world where time travel became a reality, a group of students were selected to participate in a "Space Time Adventure.</i></p> <p><i>As the students stepped into the time machine, a brilliant scientist, K, greeted them enthusiastically. He explained that they would be traveling back in time to four ancient civilizations and experience history in a way that they never thought possible."</i></p>	<p><i>"It is the year 2053. Deep sea mining near Antarctica has accidentally disturbed a huge pool of frozen methane on the seabed. Methane gas enters the atmosphere, accelerating the climate crisis. Temperatures in Singapore have gone beyond 40 degrees Celsius, putting the elderly at risk of heat stroke. Huge wildfires are ravaging Sumatra and Kalimantan, sending thick haze pollution across the region. The rising sea level causes flooding in Chinatown, where many elderly live. The United Nations asks Singapore to activate Ops HOPE. The world needs heroes. Equip yourself with the skills to invent solutions that will lead us out of this planetary emergency."</i></p>

**SCHOOLS/ORGS TO CHOOSE 4 OUT OF 8 MODULES**

<b>MODULE 1: MYSTERY OF THE PYRAMIDS</b> Game Design using MakeCode Arcade	<b>MODULE 1: CLEAN SOURCES OF ENERGY</b> Energy-Saver Prototypes using micro:bit
<b>MODULE 2: ANCIENT EGYPTIAN HIEROGLYPHS</b> Artificial Intelligence (AI) Translator using Kittenblock	<b>MODULE 2: RISING SEA LEVELS</b> Build AR/VR game using CoSpaces
<b>MODULE 3: PAYING TRIBUTE TO EMPRESS CONSORT MUMTAZ MAHAL</b> Programming wireless musical instrument using micro:bit	<b>MODULE 3: STAYING CONNECTED IN A CRISIS</b> Build an Informational Mobile App using Thinkable
<b>MODULE 4: FLOODING OF THE GANGES RIVER</b> Building an IoT device using Arduino	<b>MODULE 4: AI MAKES THE EARTH LAST LONGER</b> Create Practical Machine Learning Models using Teachable Machine
<b>MODULE 5: HANGING GARDENS OF BABYLON</b> Building a Smart Watering System using micro:bit	<b>MODULE 5: CLIMATE ACTION FOR EVERYONE</b> Create Climate Action Games using Scratch
<b>MODULE 6: BABYLON IRRIGATION</b> Design a game using Kittenblock	<b>MODULE 6: FIRES &amp; DEFORESTATION</b> Data Analysis and Map-Making using GIS and Google Maps
<b>MODULE 7: THE GREAT WALL OF CHINA</b> Programming Autonomous Cars using Arduino	<b>MODULE 7: WARMING CLIMATES</b> Build a 3D Model of a climate-friendly building using Tinkercad
<b>MODULE 8: CENSUS REGISTRATION DURING QIN DYNASTY</b> Develop Mobile App using Thinkable	<b>MODULE 8: CLIMATE-FRIENDLY DIETS</b> Build Infographics using Canva

**CHILDREN TAKE HOME THE FOLLOWING IN THE DIGITAL-MAKING KIT:**


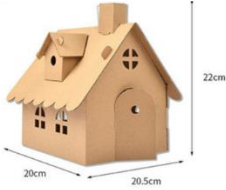
Micro:bit Kit	Micro:bit Kit
Add-ons such as: <ul style="list-style-type: none"> <li>• Ultrasonic Sensor</li> <li>• Fan Module</li> <li>• NeoPixel LED Strip</li> <li>• Jumper Wires</li> </ul>	Add-ons such as: <ul style="list-style-type: none"> <li>• Servo Motors</li> <li>• LED Bulbs</li> <li>• Alligator Clips</li> <li>• Jumper Wires</li> </ul>
KittenBot IOBit Expansion Board	CoSpaces Edu Pro License (1 year subscription)
Pre-cut Cardboard House (for smart home prototype)	Cardboard VR Goggles

**HOME-BASED LEARNING (HBL) DIGITAL-MAKING KIT**




**'SPACE-TIME ADVENTURE' DIGITAL-MAKING KIT**

ITEM	DESCRIPTION
	<p><b>Micro:bit v2.2 kit</b></p> <p>The micro:bit V2.2 is a pocket-sized computer that introduces you to how software and hardware work together. It has an LED light display, buttons, sensors and many input/output features that, when programmed, let it interact with you and your world.</p>
	<p><b>KittenBot IOBit v2.0</b></p> <p>The KittenBot IOBit v2.0 is a low-cost expansion board for the micro:bit. It has expanded all the IO resources on the micro:bit for use and it also comes with a buzzer on the board.</p>
	<p><b>Ultrasonic Sensor</b></p> <p>The ultrasonic sensor is a sensor that can measure short to medium distances from solid surfaces via sonar location. Ultrasonic sound waves are emitted from the device which bounce off surfaces. The return waves are measured, and the time taken to return (along with the known speed of travel) are used to calculate distance.</p>
	<p><b>Fan Module</b></p> <p>The fan module is an output module that can be controlled by the micro:bit and other sensors. The speed of the fan rotation can be operated using PWM to change the fan rotation speed.</p>
	<p><b>NeoPixel LED Strip</b></p> <p>A NeoPixel is an individually addressable, colour-changing LED that can be controlled from a single pin on the micro:bit. NeoPixels can be chained together and are often supplied as tapes or in accessories that contain multiple NeoPixels.</p>

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ITEM	DESCRIPTION
	<p><b>Jumper Wires</b> Jumper wires are electrical wires with connector pins at each end. They are used to connect two points in a circuit without soldering.</p>
	<p><b>Cardboard House</b> Pre-cut cardboard house to create a smart home.</p>

### 'HEROES OF THE PLANET EARTH (HOPE)' DIGITAL-MAKING KIT

ITEM	DESCRIPTION
	<p><b>Micro:bit Kit</b> A tiny, programmable computer that lets you get creative with digital technology.</p>
	<p><b>Servo Motor</b> This motor can be controlled with a Micro:bit computer and has attachments like cardboard pieces attached to it to create a wide range of prototypes.</p>
	<p><b>LED BULBS (ASSORTED COLOURS)</b> The LED bulbs can be controlled with a Micro:bit to create prototypes involving different lights and colours.</p>

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ITEM	DESCRIPTION
	<p><b>Alligator Clips</b> Alligator clips are used to attach components such as LED bulbs to Micro:bit.</p>
	<p><b>Male Jumper Wires</b> Used alongside the alligator clips, the male jumper wires help to attach servo motor to Micro:bit.</p>
	<p><b>Cardboard VR Goggles</b> Insert smartphone into the viewer to immerse into a CoSpaces VR environment.</p>
	<p><b>CoSpaces Edu Pro License</b> Create unlimited CoSpaces projects, full access to the 3D objects library and other cool features not available in the basic (free) version.</p>