Briefing on AI For Fun

Objectives

- Increase exposure to computational thinking, coding and digital making, creating useful prototypes to solve real world problems.
- Leverage on innovation and values to make a difference towards improving our community
- Generate interest for possible computing electives at upper secondary

Classes on AI to be offered to all primary & secondary school students in S'pore

From 2025, students will be offered five-to ten-hour modules on Artificial Intelligence (AI) in all primary and secondary schools.

AI for Fun will build on CFF modules

Known as "AI for Fun", these modules will be introduced under the "Code for Fun" (CFF) programme and will offer students additional opportunities for tinkering with AI technology, according to the Ministry of Digital Development and Information (MDDI).

Such opportunities include getting students to understand what a smart robot is and training such robots to respond to external signals.

These modules also will build on the 10 hours of CFF modules that are already being offered to primary and secondary schools.

Students will also learn about ethical uses of AI

Students will also be taught relevant digital literacies, such as understanding AI, its uses, risks, and limitations, and ethical considerations in the course of learning different subjects in schools, beyond the CFF modules.

Other skills include verifying the credibility of online information sources and the importance of data security, privacy, and responsible online behaviour.

In addition, teachers will guide students on how to use AI to support their learning, with an emphasis on ethics such as the importance of academic integrity and proper data handling.

Learn for Life

- Learn for life and pick up new interest and skills
- Developing the foundational skills that will come in handy when you are entering the wok force and looking at deepening skills that are useful to you.

Hot jobs in 2024 in Singapore

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These are the roles with the most vacancies.

Top 5 PMET* vacancies

Rank in 2024~	Occupation	Range of wages employers are prepared to offer
1 (2)	Teaching and training professional	$2,500 - $8,250
2 (1)	Software, web and multimedia developer	$6,000 - $12,000
3 (3)	Commercial and marketing sales executive	$3,000 - $4,000
4 (13)	Civil engineer	$3,500 - $7,000
5 (31)	Financial and investment adviser	$3,500 - $4,150

Top 5 non-PMET vacancies

Rank in 2024~	Occupation	Range of wages employers are prepared to offer
1 (1)	Waiter	$2,000 - $2,500
2 (2)	Cleaner	$1,740 - $2,200
3 (3)	Shop sales assistant	$2,175 - $2,700
4 (4)	Receptionist, customer service and information clerk	$2,390 - $3,267
5 (5)	Construction labourer	$900 - $1,500

NOTE: *Professional, managerial, executive and technician
~Rank in 2023 shown in brackets

SOURCE: MINISTRY OF MANPOWER

Skills for the Future-Ready Learner

- Computational thinking
- Design thinking
- Coding
- Application of AI and its Ethical use

Future-ready Learner@HS

- At HS, we have already included exposure modules for both coding (Code for Fun at Sec 1) and AI (AI for Fun at Sec 2) at lower secondary levels.
- We hope to equip Hougeans to be future-ready learners who embrace lifelong learning and technology, so as to contribute meaningfully to society as empowered leaders, resilient innovators and community builders.

Sec 1	Sec 2
Code for Fun	AI for Fun

Sec 2: Summary of AI for Fun

- Fully paid programme by IMDA & MOE
- 10 h spread over 3 days
- Recap coding concepts learn in Code for Fun (Sec 1), including Design Thinking and Computational thinking
- Learn about Artificial Intelligence, Machine Learning and Generative AI. Use AI camera as well as Generative AI, together with basic sensors and actuators to create more complex prototypes to solve real world problems. Leverage block programming and sensors for capstone project to create a prototype solution to a problem statement related to the theme (Cities and Urban Landscapes)
- Reflection for reinforcement of Learning
- Extension and Learning – G1 to G3 Computing in Sec 3

Programme

Broad Learning Outcomes

Intro to Artificial Intelligence (AI) (3 hours)

- Understand how the quantity and quality of training data affects the performance of AI.
- Understand how biases are formed in AI-generated content.
- Understand societal implications of AI.

Generative AI and Language Models Large and Small (3 hours)

- Appreciate the different sizes of Large Language Models (LLMs) and their differences in terms of performance, resources needed and use cases.
- Appreciate how Gen AI-integrated chatbots can be enhanced with custom instructions or parameters to give more accurate and relevant responses.
- Understand the SURE framework and 3A approach in discerning information generated by AI tools.

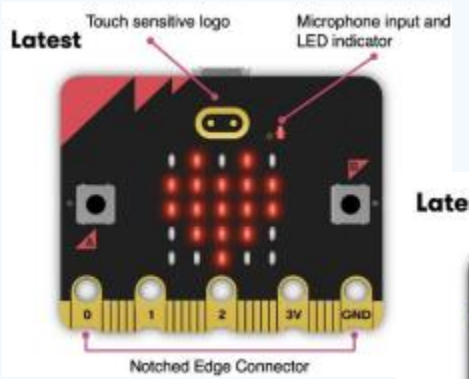
Customisable Hands On with Gen AI (4 hours)

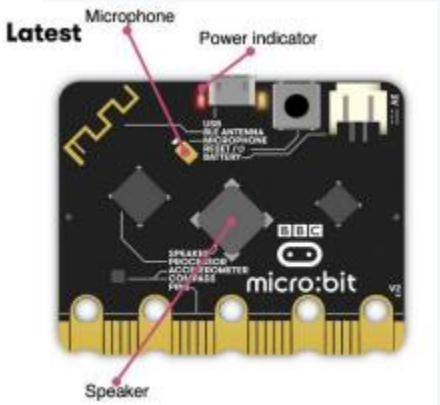
- Investigate the accuracy and authenticity of Gen AI-generated content.
- Use Gen AI tools to enhance the design thinking process and assist in writing code to develop a solution (e.g. web app or hardware prototype) for a real-world problem related to the chosen project theme.

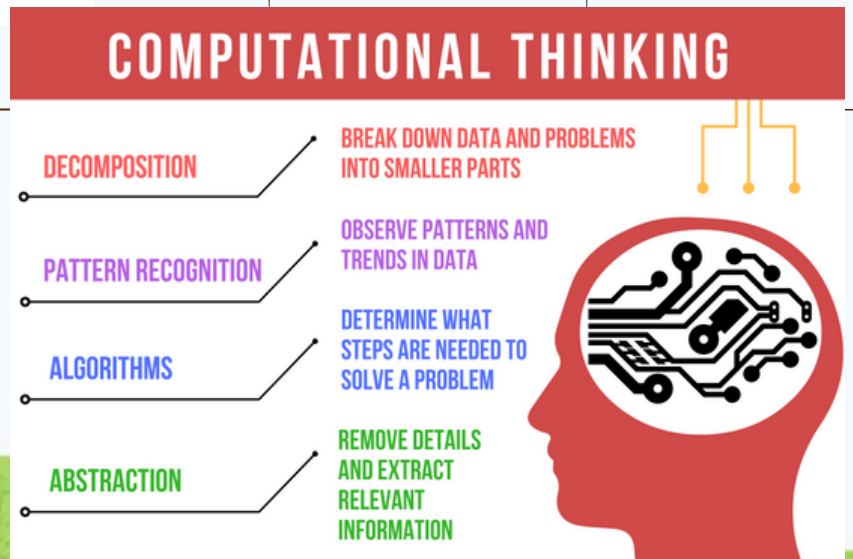
Synergising the Learning

2024 - M5GO v2.6 IoT Makers Kit

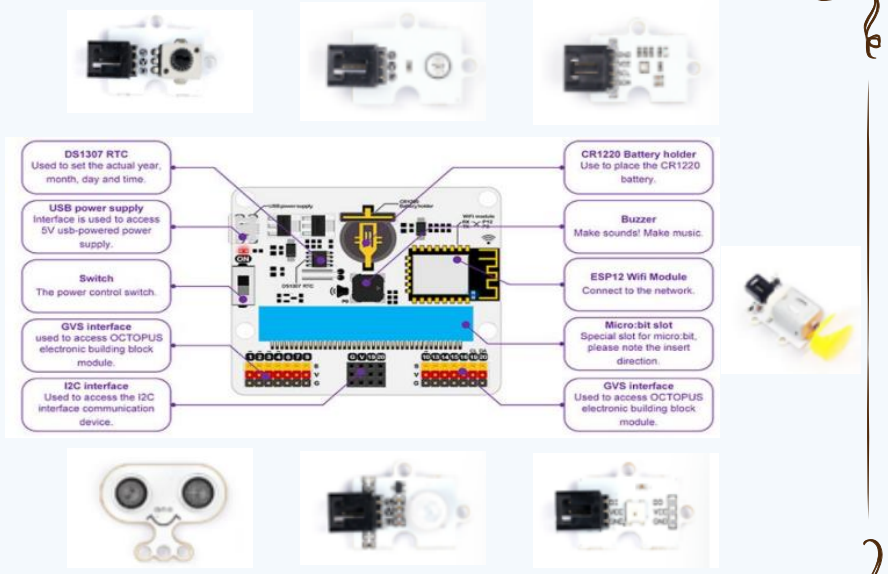
2025: Micro:bit v2.2







Peripherals for authentic learning



- Potentiometer
- Light
- Temperature
- Ultrasonic
- Motion
- LED
- RGB
- DC Motor

- Servo motor

Core Accessory Kit – Breakout board and Sensors

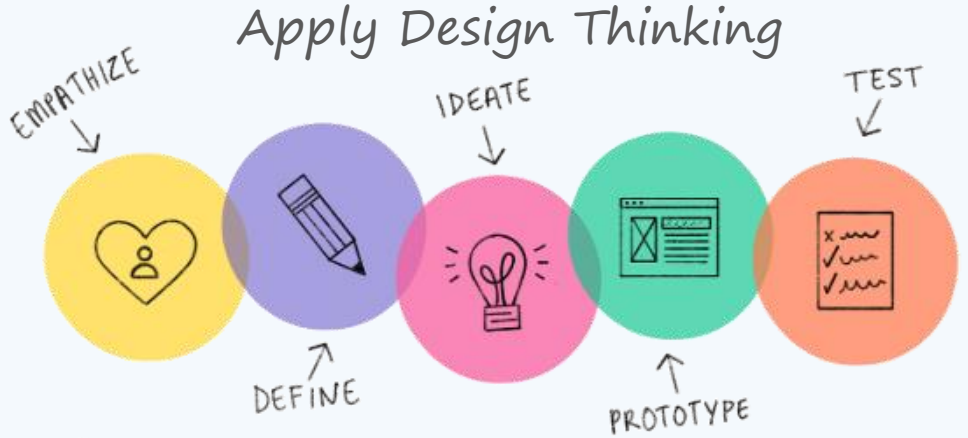
AI Smart Camera - Face recognition and colour recognition, able to learn and recognize at least 2 different objects

Theme: Cities and Urban Landscapes

Cities and Urban Landscapes focus on creating sustainable and resilient urban environments and how we may use technology to improve the design of a city to keep it a nice place to live.

Project examples include:

- Smart Urban Farming System,
- Smart Traffic Light/Management Systems,
- Flood Prediction and Management System,
- Smart Environment/ Air Quality Monitoring Systems.



- The project theme accessories kits for emerging technologies for micro:bit includes 3-pin GVS components that are compatible with the microcontroller kit. Sensors and actuators include:

i) Water Level Sensor ii) Soil Moisture Sensor iii) Water Pump with Relay iv) Dust Sensor v) GPS Unit

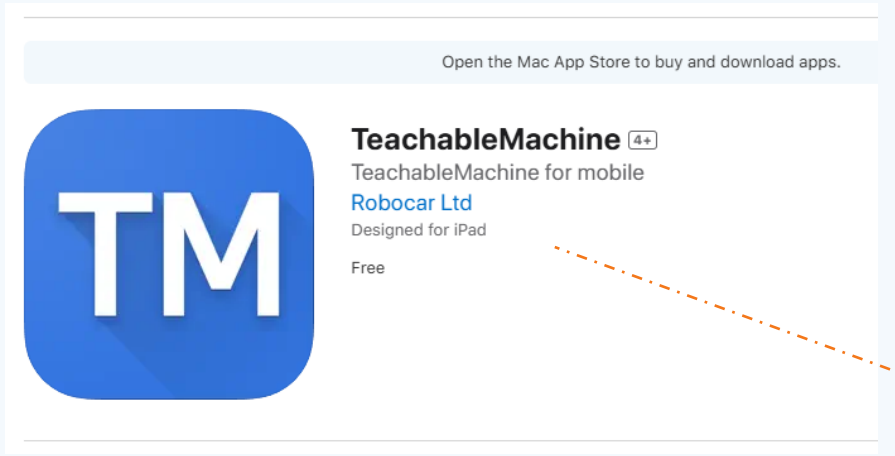
- The project theme accessories kits also contain consumables such as: i) Modular Blokies Cardboard pieces ii) Bricks and Connectors iii) Cardboard Templates iv) Cardboard Connectors

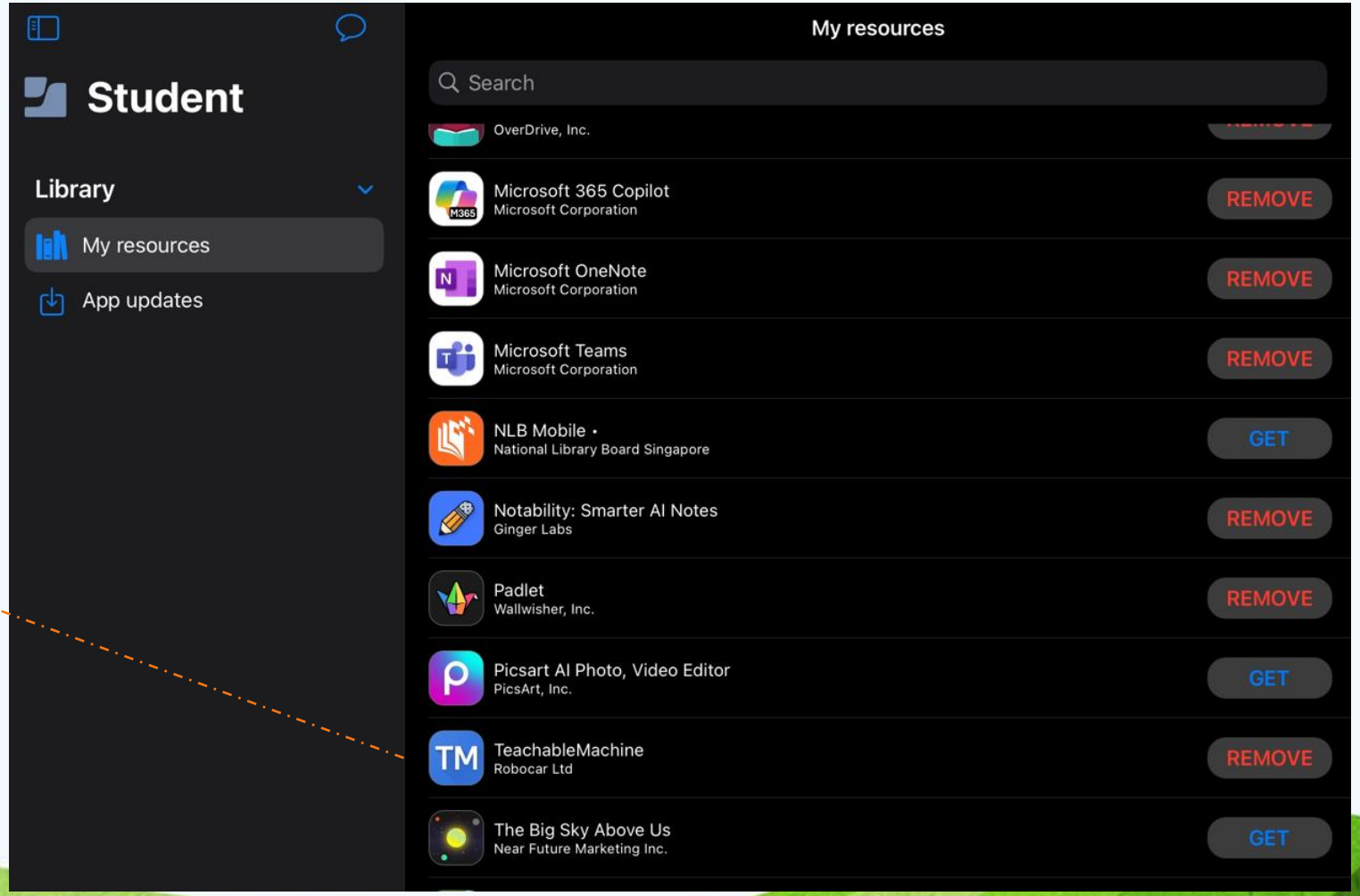
AI Pilot
Sec 2 Schedule

- Report to respective FRC Classroom
- Bring fully charged PLD
- Pair work
- 30 min recess

	Day 1	Day 2	Day 3
Description	2 Apr Wed	3 Apr Thu	4 Apr Fri
Activity	10.30 – 1.30	08.00 – 09.30	8.00 – 10.00
Break	Based on trainer	Recess 9.30 – 10.00	Recess 1000 - 1030
Activity	Nil	10.00 – 11.30	10.30 – 12.30

Download App from Jamf student





Inspiring Hougeans to be GREAT

- Download the App. Bring a fully charge PLD with power adapter and cable.
- Be responsible in the use of AI platforms.
- Whatever is shared online, stays online. Do not share sensitive and personal information online.
- Take good are of the hardware. They are needed for lessons as well as for future cohorts.
- Enjoy the learning.

Other Administration Matters

- Learning for Life: Complete the SLS introductory modules after the workshop.

Sec 1	Sec 2
Access SLS and complete assigned module: **Emerging Technologies: AI**	Access SLS and complete assigned module: **AI4I® – Literacy in AI (from 2 Apr)**

- Report punctually to your own classrooms after recess.
- Be properly attired and be respectful to the trainers.
- Bring writing materials (i.e. Pen)