



Reminder

Please submit

‘Media Release Consent Form for Participants’

<https://go.gov.sg/mediareleasehackathon2024>

PEI HWA HACKATHON



Innovative Solutions
to Tomorrow's Problems

BRIEFING FOR PARTICIPATING SCHOOLS

11 APRIL 2024

ORGANISER AND SUPPORT

ORGANISED BY



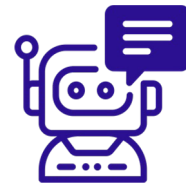
SUPPORTED BY



PROGRAMME OUTLINE

(11 APRIL)

Time	Agenda	Venue
2.30 - 3.30 pm	Distribution of micro:bit set Pei Hwa Hackathon Briefing	Library
3.30 - 5.30 pm	micro:bit Training	Computer Labs 1 and 2

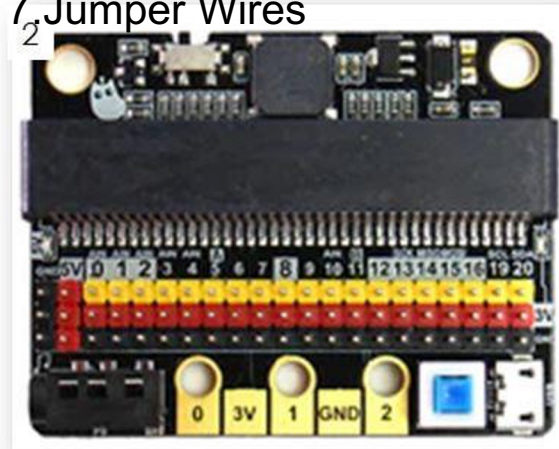
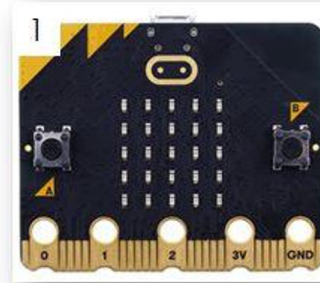


BRIEFING AGENDA

1. Hackathon Theme
2. Rules and Regulations
3. Competition Deliverables and Requirements
4. Judging Criteria
5. Awards
6. Components in micro:bit kit
7. Carnival & Showcase Day Programme Outline
(28 May)
8. Training Session Details

MICRO:BIT COMPONENTS

1. micro:bit v2.2kit
2. KittenBot IObit
3. 3V Servo Motor
4. Analog Rotation Sensor
5. Ultrasonic Sensor
6. NeoPixel LED Strip
7. Jumper Wires



The background features a white base with vibrant watercolor splashes in shades of blue, teal, and green. Scattered throughout are various geometric wireframe structures, including polyhedrons and star-like patterns, rendered in thin lines of gold, brown, and white. On the right side, there are faint, light blue circular arcs and a small solid blue circle, suggesting a technical or scientific theme.

2024 PEI HWA HACKATHON THEME

Innovative Solutions to
Tomorrow's Problems

What are some examples of Tomorrow's Problems?

Climate Change

Renewable
Energy Sources

Mental Health
and Well-being

Healthcare

Access to
Resources

Examples of Tomorrow's Problems

1. Climate Change - The impacts of climate change, including extreme weather events, rising sea levels, and biodiversity loss, are expected to intensify in the future, leading to increased risks to human health, food security, and economic stability.

2. Renewable Energy Sources - The increasing demand for energy coupled with the need to reduce greenhouse gas emissions has led to the development of renewable energy sources such as solar, wind, and hydro power.

Examples of Tomorrow's Problems

3. **Mental Health and Well-being** - The impact of mental health issues, including depression, anxiety, and stress, on individuals and societies is gaining greater attention, and addressing mental health challenges may require significant resources and support.

4. **Healthcare** - With an aging population and increasing healthcare costs, innovative solutions such as telemedicine, personalized medicine, and AI-assisted diagnostics are being developed to improve access to care and reduce costs.

Examples of Tomorrow's Problems

5. **Access to Resources** - The availability and equitable distribution of resources such as clean water, food, energy, and education may become more challenging due to population growth, urbanization, and changing consumption patterns.

Rules and

General Rules:

1. Each Hackathon participating team should be made up exclusively of students who are not organizers, volunteers, judges, sponsors, or in any other privileged position at the event.
2. All the students must uphold Academic Integrity in the competition and ensure that all project-related information submitted and presented is their original work.
3. Teams can be disqualified from the competition at the organizers' discretion. Reasons might include but are not limited to breaking the Competition Rules, behaving in a way that violates the code of conduct or other unsporting behaviour.
4. The organiser reserves the right to amend the terms and conditions above due to unforeseen reasons.

Competition Deliverables



1. Physical Prototype with micro:bit solution

1. Visual Aid for Presentation

Either

- a. **Poster (not larger than A2 size)
- b. Presentation Slides
- c. Video
- d. Skit

Contents for Visual Aid:

- Team name
- Project Title
- Problem Statement
- Solution
- Impact of Solution

Competition Requirements

Prototype and Presentation Deliverables:

1. Teams should complete their project prototypes before the Showcase Day. The Showcase Day is mainly for touching up on the projects and decorating their booths.
1. Only **3 micro:bits** are allowed in the prototype creation. However, there are **no limits** on the inputs and outputs used.
1. Each team is only given **5 minutes** for their **presentation** on Showcase Day. This includes time for prototype demonstration and Q & A from the panel of judges.

Competition Requirements

4. Teams are encouraged to prepare posters and other decorative materials to beautify their booth. Effort to engage the audience would also be observed.
4. The maximum size of the poster is **A2 size**. Students should only decorate within their booth space.
4. On the Showcase Day, once time is up, teams must stop all project refinement and booth decoration.

Judging Rubrics

Criteria	Weightage
Adherence to Theme Relevance of concept to the theme, including display of features concerning the theme	20 %
Presentation Quality and clarity of presentation	20 %
Innovation Creativity and originality of the concept solution	20 %
Impact Extent of application of the concept solution to solve stated problem	20 %
Product Design Aesthetics of the concept solution	20 %

AWARDS

- Champion
- First Runner-up
- Second Runner-up
- Most Innovative Solution Award
- Best Presentation Award
- Selffix Best Design Award
- People's Choice Award
- Commendation Award (x5)

Showcase Day (28 May 2024)

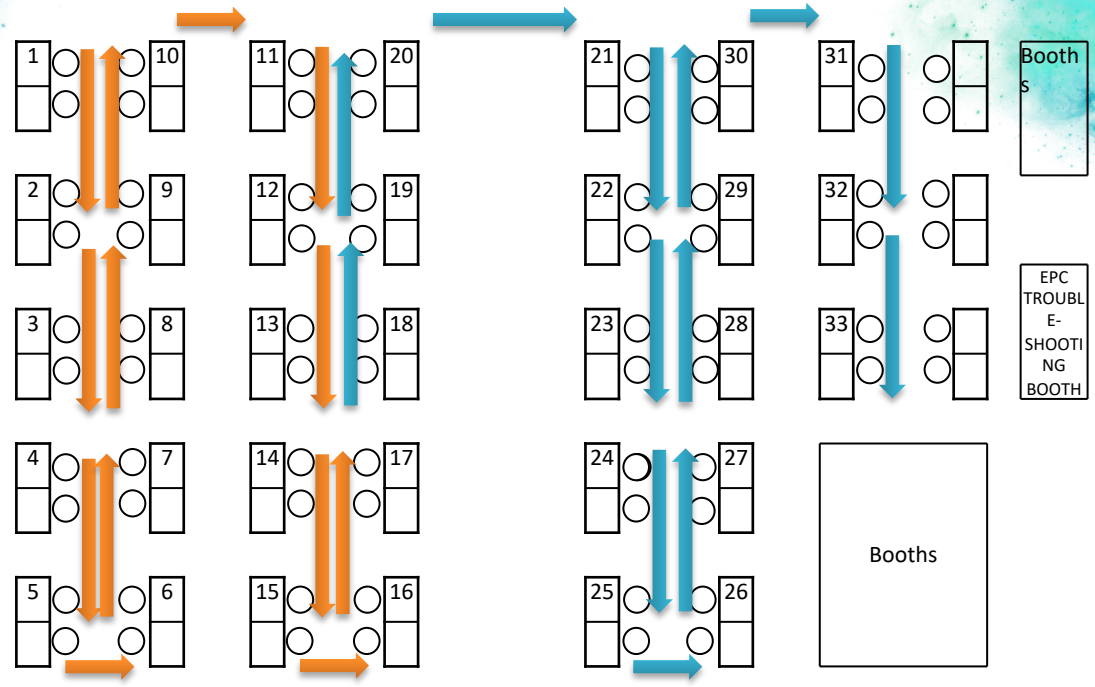
Programme Outline

Venue: Pei Hwa Secondary School

Time	Agenda
8.00 to 9.30am	Participants setting up allocated booth
9.30 to 10.00 am	Opening ceremony and photo taking
10.00 to 12.30pm	Judging (5 mins presentation, 5 mins Q&A), participants to go around the different booths and carnival
12.30 to 2.00 pm	Lunch (Provided), Judges deliberation
2.00 to 3.00 pm	Prize giving and closing ceremony

FINALE LAYOUT (28 MAY 2024, HALL)

POPCORN &
CANDY
FLOSS



Things to bring on 28 May

Each team will bring along:

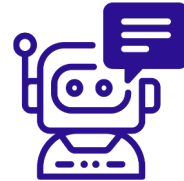
1. Laptop and Charger

1. Physical Prototype with micro:bit solution

1. Visual Aid for Presentation (Optional)

Either

- a. Poster (not larger than A2 size)
- b. Presentation Slides
- c. Video
- d. Any additional Materials



Booth Logistics



Each team will be provided with:

- 1 Easel
- 2 Tables
- 2 chairs
- Extension cable
- PHSS Student facilitator as Support (Technical Assistance provided)

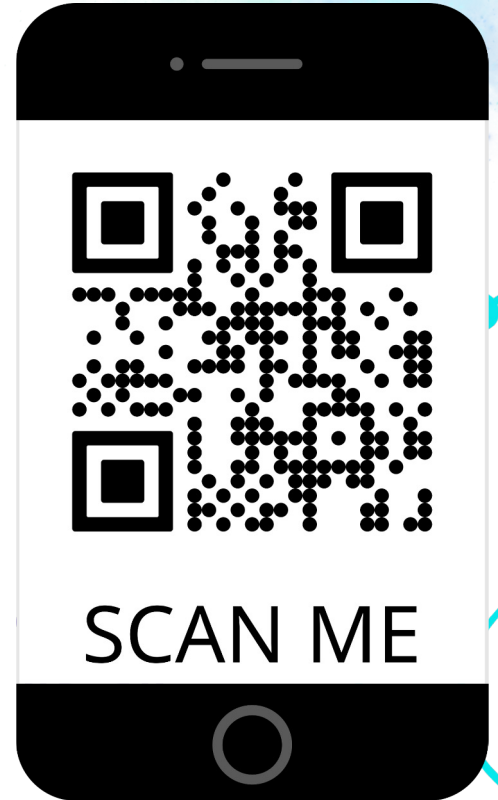


For more information

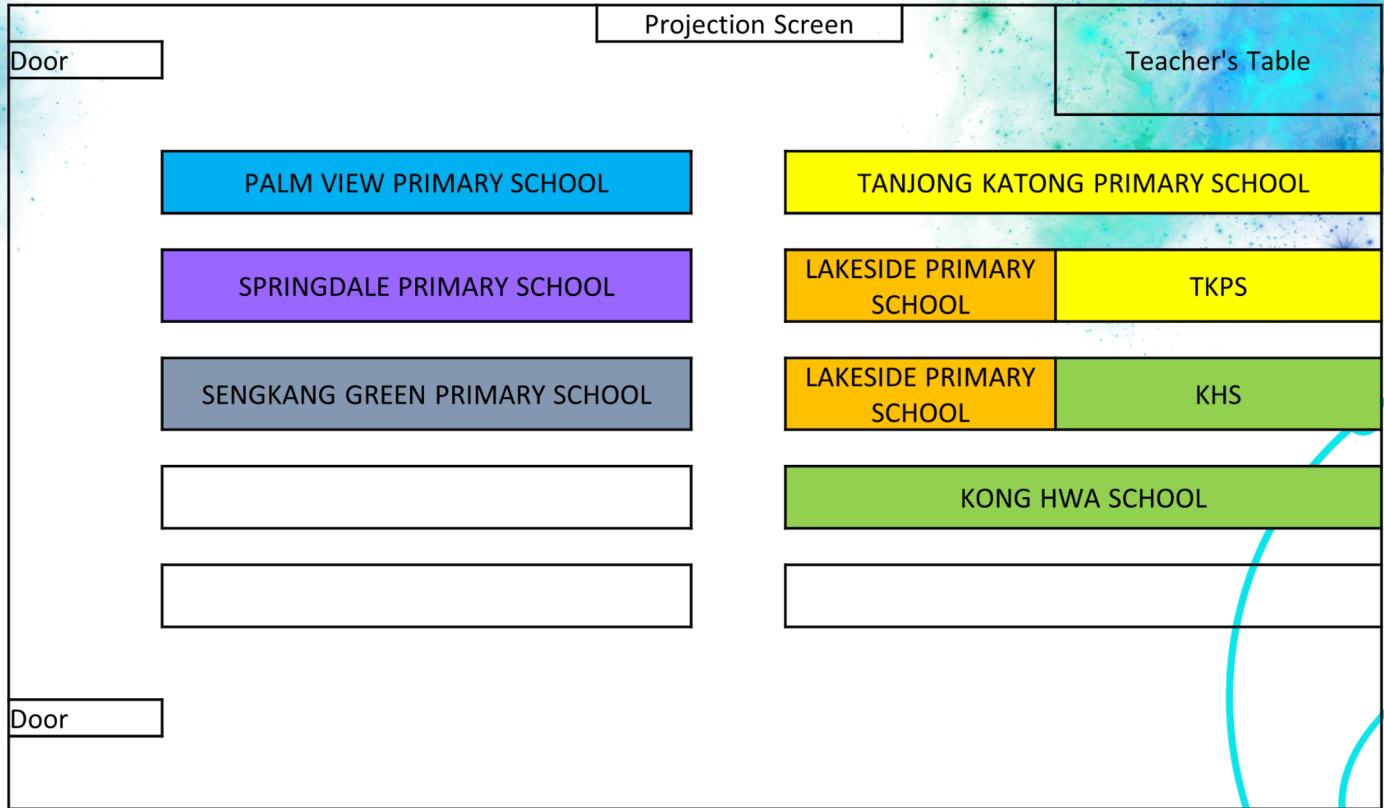
1. Pei Hwa Hackathon Website:

<https://phss.epc-education.com/hackathon-2024/>

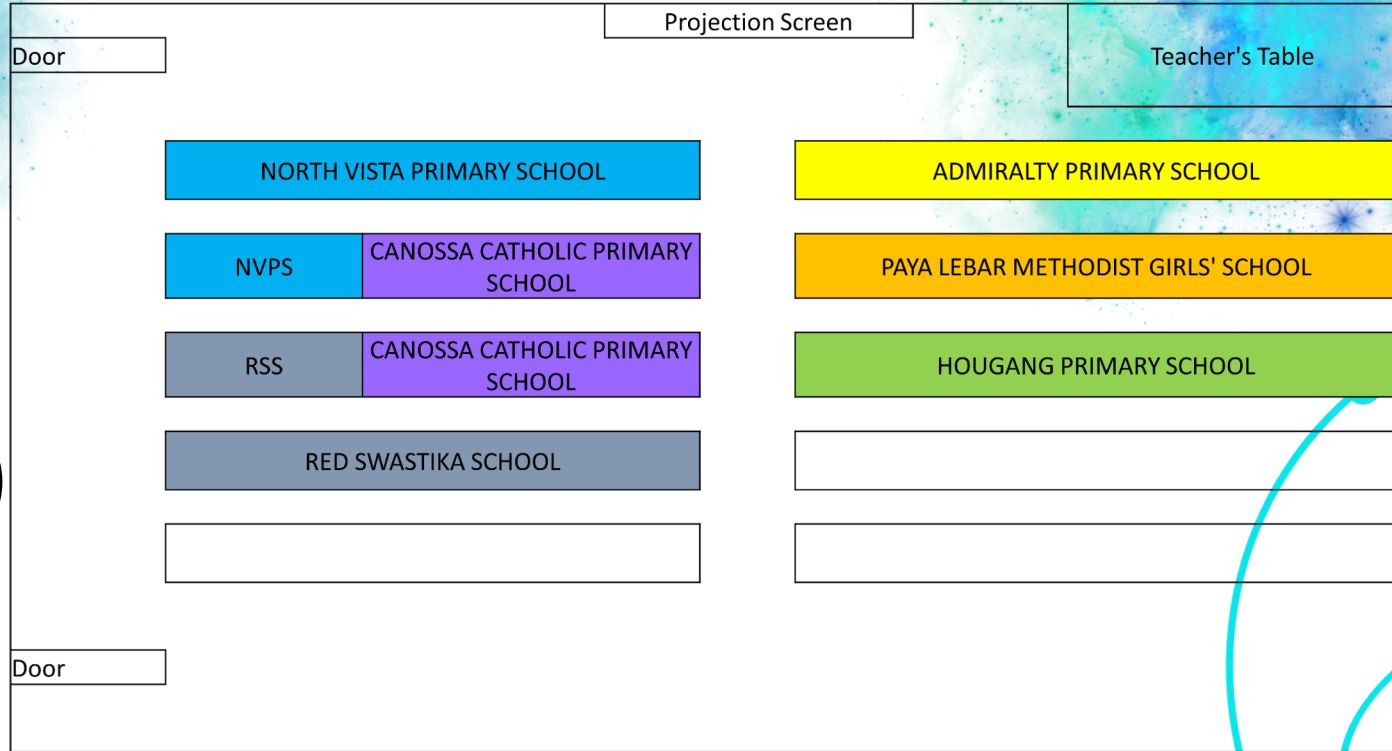
1. Instagram: @peihwahackathon



TRAINING LAYOUT (COM LAB 1)



TRAINING LAYOUT (COM LAB 2)



Q & A



THANK YOU

