Work Attachment Experience with Science Centre STEM Inc

from 8 January to 4 March 2024

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My Professional Development Plan

My Learning Needs

Through this attachment, I hoped to

- deepen my understanding of curriculum development methodologies,
- gain proficiency in utilising emerging technologies for educational purposes,
- expand my knowledge of pedagogical strategies tailored to designing STEM learning experiences, and
- stay updated on the latest trends and advancements in the STEM education landscape.

Opportunities

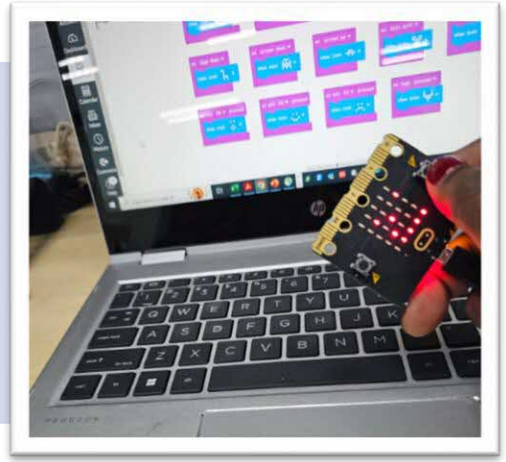
- The work attachment description for Science Centre STEM Inc appealed to me because it combines my passion for STEM with my interest in developing better science learning experiences that incorporate STEM.
- I was impressed by the innovative approach the organisation takes in collaborating with schools to integrate STEM education into science lessons and CCA-related activities in alignment with sustainability, and the impact it has on shaping future generations.

My TWA+ Experience

During my attachment, I was involved in the following:

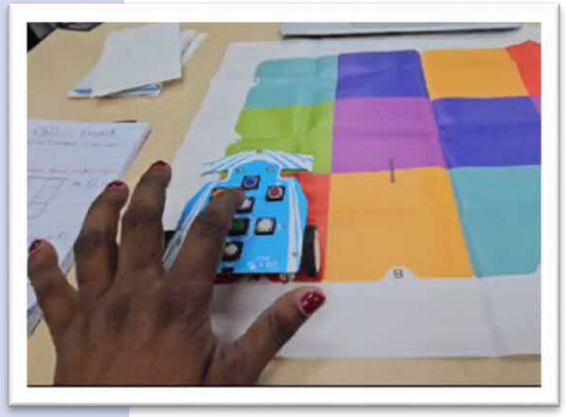
Micro:bit Training and Development

- Reviewed the course outline detailing micro:bits
- Watched instructional videos on coding with micro:bits
- Engaged in hands-on coding activities with micro:bit
- Created lesson packages for a science lesson on STEM Applied Learning in the area of sustainability infused with micro:bits



AWS and Wizbot Workshop Preparation

- Read and comprehend the Amazon Web Services (AWS) lessons
- Watched relevant instructional videos
- Familiarised myself on the Wizbot platform
- Developed a PowerPoint presentation for lesson delivery
- Crafted a comprehensive lesson plan for cloud computing and Wizbot workshop
- Prepared a script for effective on Wizbot for students
- Designed an SLS lesson focusing on Part 3 of AWS
- Completed self-training in WIZBOT navigation



My TWA+ Experience

Workshop Organisation and Logistics

- Worked with school to organise the workshop
- Looked into the logistics for the conduct of the workshop

Other Learning Opportunities

- Explored drone flying techniques as part of STEM lessons at the Science Centre
- Engaged in STEM engineering sessions at NTU
- Participated in seminars and conferences featuring talks by international scientists
- Engaged in exploring ultimate food sustainability solutions

Throughout my time at STEM Inc, I actively participated in relevant workshops and training sessions, and engaged in continuous self-reflection on how I could meet my learning needs effectively. This proactive approach allowed me to grow professionally and contribute meaningfully to the organisation's mission of promoting STEM education.

My Learning and Application

Professional Growth and Skill Enhancement

Through the experience, I

- gained invaluable insights and skills for personal and professional development;
- sharpened my ability to navigate complex projects and adapt to dynamic challenges through collaboration within multidisciplinary teams at STEM ALP;
- expanded technical skills in micro:bits, drone flying, and Wizbot navigation; and
- pushed myself beyond my comfort zone, grew professionally and developed resilience.

School Implementation and Knowledge Sharing

After the attachment, I

- collaborated with the ICT Head of Department to introduce Micro:bits lessons for P5 students,
- organised a Wizbot workshop for interested P4 and P5 students,
- integrated STEM ALP lessons for P1 to P6 students,
- developed a new framework to facilitate STEM education enhancement,
- conducted sharing session on STEM ALP lessons and resources with Science teachers, and
- consistently attended COP STEM workshops and courses for continuous self-improvement.