Teacher Work Attachment Plus (TWA+) Programme

Work Attachment Experience with Science Centre Singapore

from 10 April to 5 May 2023

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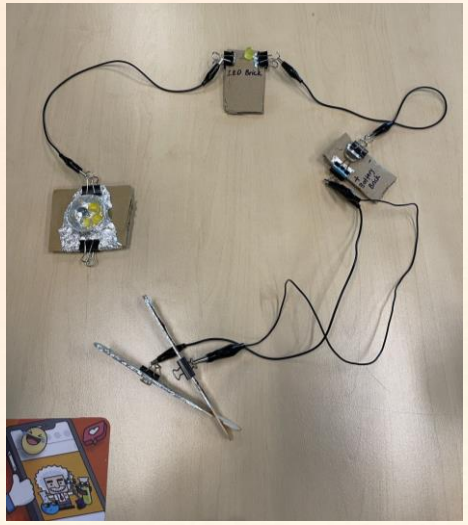
My Work Attachment Story

Chapter 1: The Setting and The Catalyst

Tinkering* has intrigued me since childhood and continues to captivate me as an adult. I have discovered that this hands-on approach is more than just a pastime—it is a journey of discovery, learning, and personal growth.

The different prototypes



**Tinkering is the process of hands-on experimentation and problem-solving to create, modify, or repair technology or scientific equipment. It involves making small adjustments and trying out different approaches to achieve a desired outcome. Tinkering is often used in STEM education to encourage creativity, innovation, and critical thinking skills.*

My Work Attachment Story

Chapter 1: The Setting and The Catalyst

I decided to take the next step in my journey by seeking a work attachment at Science Centre Singapore, a place where curiosity thrives, and innovation knows no bounds. Within the dynamic setting of Science Centre Singapore, I believe I could refine my tinkering skills and, more importantly, ignite a similar passion in students. I aspire to encourage them to embrace tinkering as a tool for learning, both within the classroom and for leisure. This is more than just a work attachment; it is a chance to bridge my passion for tinkering with the role of an educator, and to spark curiosity in the minds of those I interact with.

Facilitating Tinkering with the public

My Work Attachment Story

Chapter 2: The Plot

At the Science Centre Singapore, I had the privilege of collaborating closely with the lead Science educator. These collaborations enriched my understanding of tinkering and provided a platform for engaging in enlightening discussions. His expert insights became invaluable as he gave feedback on various aspects of my tinkering journey, the design of lessons and the facilitation of tinkering sessions.

I took this guidance to heart when I embarked on the task of designing two distinct tinkering packages: ‘sewn circuits’ and ‘scrappy circuits’. The process of conceptualising these packages allowed me to delve deeper into the nuances of tinkering, considering how to make the experience both engaging and educational.

I had the opportunity to facilitate tinkering sessions for the public and discovered that mastering the use of tools is a cornerstone of tinkering. This skill, often overlooked, plays a crucial role in our everyday lives, functioning as an essential survival skill. As I engaged with participants, it became evident that tinkering offers more than just the acquisition of practical skills. I observed firsthand the development of problem-solving skills, the cultivation of critical thinking skills, and the nurturing of qualities such as perseverance. These valuable lessons, often elusive within the confines of traditional learning, were unfolding right before me in the tinkering lab.

Personally, my time at the tinkering lab was both rewarding and enjoyable. The abundance of tools available encouraged experimentation, while the wide range of materials facilitated exploration. Yet, perhaps the most influential factor was the ambience and environment that supported the process of prototyping—the freedom to experiment, to make mistakes, and to iterate.

My Work Attachment Story

Chapter 3: The Resolution

Tinkering is more than creation; it embodies a holistic approach to learning and problem-solving that transcends the confines of textbooks. This belief springs from my conviction that tinkering nurtures creative and critical thinking, as its open-ended nature fosters numerous possible solutions. I aspire to integrate the tinkering experience into our curriculum, tailoring each level to emphasise diverse tool utilisation and material exploration.

Through these experiences, our students will cultivate adaptability, creativity, effective collaboration, communication skills, and innovation—an amalgamation primed for success across multifaceted professional arenas. Simultaneously, I aim to ignite a similar understanding within our educators, underscoring that tinkering is the conduit to fostering creative and critical thinking.

Recognising the importance of this approach, I envision conducting professional development sessions for teachers, equipping them with the skills to facilitate tinkering effectively. By instilling the mindset of tinkering, we empower both students and educators to engage with learning and problem-solving in a dynamic, hands-on manner that extends well beyond the traditional boundaries of education.