





## Ms Lee Li Wen - May 2022

Coming to the Science Centre really broadened my perspective in terms of science education, especially the way we ask questions. The educators from the Gallery Experiences team really inspired me through their facilitation, particularly in tinkering. This attachment got me reflecting on my classroom practices, and hopefully I'll be able to get my students to be more curious! Thank you, Science Centre, for these inspirational four weeks, and also for the beautiful Eco-garden that was a place for healing!



## Ms Lydia Li - May 2022

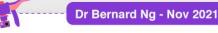
I was very excited when I found out that I will be going to the Science Centre for my TWA as they are known to create innovative programmes and I was very keen to find out the process behind it. There were many departments aka the brains behind all these great ideas and I was attached to the Community and Outreach department. I observed the development processes behind SCS projects and signature events and am very inspired to try some ideas in my classes and even my CCA, NPCC!



# Mdm Norain Bte Hassein - Jan 2022



My six weeks with KidsSTOP was enriching indeed. I was with the Little Footprints team which was developing their fourth kit - Journey to Space. I was tasked to curate the pre-learning story and create the missions. Together with the team, we searched for the most suitable resources to be used for the missions in the kit and the exchange of ideas during our team meetings allowed for better prototypes to be developed for the kit. I was also honoured to be given the opportunity to contribute articles to the 'I Saw the Science' blog which is rich with resources that can be used for teaching and learning of Science in schools.



My TWA stint with the Gallery Experience team was a memorable one. I got to partake in the team's learning journey, demo show validations, tinkering-activity training, and on-the-ground interaction with visitors at SCS. In summary, a TWA experience at SCS is like a carpenter interning at a hardware megastore - at every turn and in every staff we meet, lies a powerful tool or idea that we can use to advance our craft.



## Mr Jamin Jeow - May 2021



This attachment with CRADLE provided me with invaluable hands-on experience in prototyping projects & widened my perspective on possible applications and partnerships with the various arms of outreach at SCS. I also had opportunities to interact with other educators in SCS to understand the mission and role of SCS in bringing STEM education and science to our wider community. Thank you, Science Center Singapore.

## **Teacher Work Attachment at Science Centre Singapore 2023**

**Duration:** 4 weeks

**Period:** a) Friday 19 May - Friday 16 June 2023 OR

b) Friday 20 Oct- Friday 17 Nov 2023



• TWAs of different duration/period is available upon request, on a case-by-case basis. Do write to us and we will connect with you to discuss further.

## **Application**

For MOE officers, please visit <a href="http://intranet.moe.gov.sg/academy/TWA/Pages/TWA.aspx">http://intranet.moe.gov.sg/academy/TWA/Pages/TWA.aspx</a>. Academy of Singapore Teachers (AST) will facilitate the application.

For non-MOE officers (e.g. teachers from independent schools), please submit your application here: <a href="https://www.form.gov.sg/5fe99cdc315aec001150e61e">https://www.form.gov.sg/5fe99cdc315aec001150e61e</a>

#### Deadline

May/June attachment deadline is 1 April 2023. Oct/Nov attachment deadline is 1 September 2023.

## **Enquiries**

For enquiries, please email to teachers@science.edu.sg.

Teachers from all background, including non-science teachers, are welcome. You will have the opportunity to work alongside staff of Science Centre and broaden your experience beyond the school environment. The Science Centre experience focuses on having fun while developing skills and complements the formal curricula in schools. The attachment will give you different perspectives and let you gain experience and skills in developing experiential and engaging activities/ programmes for students.

The attachment will be coordinated by our Education Programmes division. Depending on the role teachers are interested in, they may also be attached to various departments within the Science Centre giving them the opportunity to observe and assist the team in developing and conducting programmes.



All teachers will undergo an orientation programme before starting specific attachments.

Time	Activity	Description
Day 1	Logistics, orientation, and meeting staff	Introduction to mentor/s, arrangement for seating, access into the building, parking, internet access, etc
Week 1 to 4	Overview of Science Centre and education and exhibition programmes	The programme involves a sharing on our exhibitions & facilities (LI), conversations with mentor/team, walking the ground observing and being involved in programmes /activities
	Discussion with department Head/mentor and staff in the planned area of attachment	Introduction to the department staff during the attachment and discussion with mentor on possible projects for department and school
	Reflection	Teachers give feedback on their views and observations of what they have experienced, plan to do for the department they are attached to and implement in their respective school/cluster.
	Attachment to the department	The attachment allows teachers to also participate in any other activities that may be taking place at Science Centre. For example, staff sharing sessions, public talks, etc.
Week 4	Wrap-up, submission of report/reflections/project follow-up in school	Finalise report, share prototype/project, any HR matters (return staff passes, etc)

# **Types of TWAs at Science Centre**

## **TWAs suitable for Science teachers**

Attachment	Audience	Area of programming	Outcome
Science Catalyst @Education Programmes	Primary and Secondary	Topics in STELLAR, general science topics, DNA, Chemistry, Food Science, Physics, Gaming, Math, Teacher PD	Prototype activity e.g. development of pre- and post-programme activities and alignment with school curricula.
EduMentor @CRADLΣ Lab	Secondary and higher levels	Physics and engineering experimentation and project mentorship  Signature programme - R&D Experience Programme, Teacher PD	Observe and assist with mentoring of students in research projects; available 1 <sup>st</sup> half of June (Student Mentorship Programme) and mid-November to mid-December (R&D Experience Programme).
		(Picture: computerised VIS fluorescence/absorbance photospectrometer designed & built by students at CRADLΣ)	Mini R&D project (specific topics to be discussed and arranged in advance). A common theme is the design and prototyping of low-cost scientific apparatus and experiments for educational use (involving practical and transsubject application of STEM disciplines). Non-prototyping investigative projects making use of available facilities are also possible.

Attachment	Audience	Area of programming	Outcome
STEM Resource Developer @STEM Inc	Primary and Secondary	Development of STEM resources such as exemplar modules, online courses, educational kits, social media content to engage youth, etc  Teachers receiving training from STEM Educators in Science Centre  Sample project prototype: Impeller and Gear pumps	Propose a STEM resource to be developed alongside Science Centre staff.  Teachers are expected to pilot the STEM resource in their schools. The resource may then be shared with the larger education fraternity.
Science Catalyst @Gallery Experience	Primary, Secondary and Public	Tinkering activities; activities that promote Scientific Thinking method and inquiry based learning; gallery Interaction & guided tours; Science Shows (for schools and public)	Teachers are expected to  - Develop activities that complements the school curriculum  - Prototype activities for Teachers' Professional Development  - Prototype suitable activities for inquiry-based gallery interaction  - Curate teachers' resources for exhibitions/ shows

## **TWAs suitable for non-Science teachers**

Attachment	Audience	Area of programming	Outcome
Imaginator @KidsSTOP	Preschool	Activities and workshops for children 2 - 8 years old. Outreach programmes, gallery trails, KidsSTOP Academy onground activities and Teacher PD	Prototype activity
Transmedia Content Creator/Writer @Editorial and Transmedia	All	Conduct research, edit and create engaging content on scientific topics that are used for exhibition, publications (print/on-line), videos, science shows, and transmedia communication.	Translate initiatives into compelling story ideas with useful messages, elevating awareness of Science Centre's impact among strategically important audiences
Science Explorer @Outdoor Learning, Fieldwork and Investigation	All	Bring elements of outdoor adventure, exhibitions and fieldwork into learning for kinaesthetic learners	Work closely with the education programmes team and exhibitions team to curate learning experiences outdoor and within exhibition spaces
Imagineer @Exhibitions	Primary, Secondary and Public	Prototyping and development of exhibits, including travelling exhibitions for schools.	<ul> <li>Teachers will be involved in</li> <li>Exhibit prototyping development</li> <li>Application of problem based solving scenarios to exhibits</li> <li>Creation of accompanying resources</li> <li>Evaluating and measuring impact of the exhibitions</li> </ul>
Events Catalyst @Events and Engagement	Primary, Secondary and Public	STEM promotion and engagement events such as Youth Science Ambassador programme and Untame festival and also working with underserved communities.	Teachers will be involved in student mentoring, project management, and creation of accompanying resources
Digital Ninja @Digital Learning Instructional Design (Offered from Semester 2, 2023)	All	Sourcing for adventurous ways to excite and engage learners across digital learning, enabling technologies, social media, gamification, mobile, VR, 3D and other modes of learning.	Adapt latest and most appropriate instructional design and learning technology techniques, theories and methodologies to create unique and engaging content.

## **Additional Notes**

Teachers may choose their area of attachment from the above list to make their experience more meaningful. Upon request, teachers may be rotated to work with various project officers in the course of their attachment, so that they will gain greater exposure.

The attachment is not only intended as a learning experience for teachers. It is also intended to help the Science Centre better understand teachers' needs and perspectives, and thereby improve its services. Thus, teachers are expected to share their experience and feedback in a brief report at the end of their attachment. During their attachment teachers could also develop resources that could be used in school and/or shared with the larger teaching fraternity.

Teachers who are interested to apply should have a passion for informal learning but need not have a Science background as long as they are able to contribute to the Centre. We also invite teachers to propose new areas for attachment other than those currently offered.

Thank you. We look forward to you joining us at Science Centre Singapore!