

Reflections of EOs on TWA @ Science Centre Singapore

TAMATA

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.

Dr Bernard Ng - Nov 2021

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 2025

Duration: 4 weeks or 9 weeks (PDL)

Period:

- a) Mon 6 Jan to Fri 7 March
- b) Mon 1 Sept to Fri 26 Sept
- c) Mon 27 Oct to Fri 21 Nov

A maximum of **20 places** are available for attachment annually.

• 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 <u>http://intranet.moe.gov.sg/academy/TWA/Pages/TWA.aspx</u>. Academy of Singapore Teachers (AST) will facilitate the application.

For non-MOE officers (e.g. teachers from independent schools), please write to <u>STEM_Cell@science.edu.sg.</u>

Deadline (Please send your application at least 1.5 months before the start of the TWA+) Jan/Feb attachment deadline is 30 Nov 2024. Sept attachment deadline is 18 Jul 2025 Oct/Nov attachment deadline is 2 Sep 2025.

Enquiries For enquiries, please email to <u>STEM_Cell@science.edu.sg</u>.

Teachers from all backgrounds, 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 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 at Science Centre Singapore will be coordinated by STEM CeLL. Depending on the role teachers are interested in, they will be attached to various departments within the Centre giving them the opportunity to observe and assist the team in developing and/or conducting programmes.



Time	Activity	Description	
Day 1	Logistics, orientation, tour around SCB and introduction to mentor(s)/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 (LJ), 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 Educators

Attachment	Audience	Area of programming	Outcome	Preferred Period
Science Catalyst @Education Programmes	Primary / Secondary Educators	Chemistry, Mathematics, and digital fabrication (including but not limited to the applications of 3D printing, laser cutting, and digital embroidery). Applicants are to indicate their areas of interest.	Develop and prototype at least 1 lesson related to highlighted topics with alignment to school curricula.	 Mon 6 Jan to Fri 7 March Mon 28 Oct to Fri 21 Nov
EduMentor @CRADLΣ Lab	Secondary / Higher Level Educators	Physics and engineering experimentation and project mentorship Signature programme - R&D Experience Programme, Teacher PD (Picture: computerised VIS fluorescence/absorba nce photospectrometer designed & built by students at CRADLΣ)	Observe and assist with mentoring of students in research projects; available 1 st half of June (Student Mentorship Programme) and mid- November to mid- December (R&D Experience Programme). or 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 trans-subject application of STEM	 Mon 6 Jan to Fri 7 March Mon 1 Sept to Fri 26 Sept

STEM Resource Developer @STEM Inc	Primary / Secondary Educators	Development of STEM resources such as exemplar modules, online courses, educational kits, social media content to engage youth, etc. <i>Teachers receiving training</i> <i>from STEM Educators in</i> <i>Science Centre</i>	disciplines). Non- prototyping investigative projects making use of available facilities are also possible. 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.	NA
STEM in Action: Designing for Discovery	Primary / Secondary Educators	Sample project prototype: Impeller and Gear pumps Our programs equip educators with the tools and strategies to engage students in Science, Technology, Engineering, and Mathematics effectively. We empower teachers to inspire the next generation of STEM leaders through hands-on learning and innovative approaches.	Design activities that encourage experimentation, creativity, and problem-solving, allowing learners to actively engage with STEM concepts that will help to develop critical thinking skills and foster a deeper understanding of STEM through interactive and practical experiences.	NA
Science Catalyst @Gallery Experience	Primary / Secondary Educators	Development of Inquiry based activities; Gallery Interaction; Guided tours; Gallery Trails; Science Shows (for schools and public)	Develop and prototype programmes for guest engagements and / or teacher's resources that complements the school curriculum with a focus in any of the following areas/ topics.	NA

 Inquiry based activities Ageing
Engineering

TWAs suitable for non-Science Educators

Attachment	Audience	Area of	Outcome	Preferred Period
		programming		
Imaginator @KidsSTOP	Preschool Educators	Activities and workshops for children 2 - 8 years old. Gallery experiences, holiday programmes, overnight camps, learning kits, teacher resources.	Develop and prototype learning experiences for children aged 2-8 years, and/or teachers' resources that complements the NEL framework, with a focus on the following topics: • Flight • Astronomy • Simple machines • Sustainability • Electricity • Magnets • Sound	• 6 Jan – 7 Mar
Transmedia Content Creator/Writer @Editorial and Transmedia	All Educators	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.	NA
Science Explorer @Outdoor Learning, Fieldwork and Investigation	All Educators	Bring elements of outdoor adventure, exhibitions and fieldwork into learning for	Work closely with the education programmes team and exhibitions team to curate learning experiences outdoor	 Mon 6 Jan to Fri 7 March

		kinaesthetic learners	and within exhibition spaces	 Mon 28 Oct to Fri 21 Nov
Events Catalyst @Events and Engagement	Primary / Secondary Educators	STEM promotion and engagement events such as Youth Science Ambassador programme, UNTAME Festival and also working with underserved communities.	Teachers will be involved in student mentoring, project management, and creation of accompanying resources	NA
Digital Ninja @Digital Learning Instructional Design	All Educators	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 the latest and most appropriate instructional design to create unique and engaging online content for Young Scientist Badge Scheme (YSBS).	NA

Additional Notes

Participants may choose their preferred area of attachment from the above list to make their experience more meaningful. Upon request, participants may be rotated to work with various project officers in the course of their attachment to 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 provide our services and offerings to the needs of educators. There are deliverables at the end of the TWA+ and can be in a form of developing prototypes and teaching resources that could be used in school and/or shared with the larger fratertiny (e.g. SLS).

Interested educators should have a passion for informal learning and keen in contributing to the Centre. A background in the sciences is not necessary. We look forward to you joining us at Science Centre Singapore!