

# Time with STEM

A Professional Development Series  
Specially Curated for Educators

## 2024 PD Sessions

Save your weekday afternoons for a date with us! Gain insights into the latest developments in STEM through our webinars, learning journeys and workshops!

Sessions are free for all MOE educators.

For more enquiries, please contact us at [stem\\_cell@science.edu.sg](mailto:stem_cell@science.edu.sg)



12 Jan 2024, Thursday

### Materials for the Future



3.00 pm to 5.00 pm



Science Centre Singapore

In 2004, Sir Konstantin Sergeevich Novoselov and Professor Sir Andre Geim successfully isolated graphene—the first known two-dimensional (2D) material—and mapped its unique properties. This one-atom-thick layer of carbon found in a hexagonal lattice is flexible, an excellent conductor of heat and electricity and about 100 times stronger than steel. For their groundbreaking work with graphene which has unlocked an entirely new area of scientific research, Sir Konstantin and Sir Andre were jointly awarded the Nobel Prize in Physics in 2010. Join us in this extraordinary opportunity to come up close and personal with a Nobel laureate and distinguished scientist, and glean insights from Sir Konstantin into the latest research and advancements in materials for the future. This workshop is suitable for educators from all levels and disciplines.

[Register here](#) for the session.



24 Jan 2024, Wednesday

### Create IoT projects with Magicbit (Workshop)



2.30 pm to 5.00 pm



Science Centre Singapore

This workshop will provide you with an introduction to the Internet of Things (IoT) and guide on creating basic IoT projects using Magicbit. Magicbit is an award winning all-in-one STEM tool for coding, prototyping, robotics and IoT. Connect Magicbit with a mobile app and experience the power of IoT. This workshop is suitable for all teachers.

[Register here](#) for the session.



25 Jan 2024, Thursday

### Origami: Gaining STEAM! (Workshop)


















2.30 pm to 5.00 pm















Science Centre Singapore













Origami is an ancient art that has emerged as a powerful inspiration for solving modern day STEM problems. Engage in a series of hands-on activities to explore the principles of origami, its link to Mathematics and its applications in STEM. This workshop is suitable for all teachers.

[Register here](#) for the session.

 7 Feb 2024, Wednesday  3.00 pm to 5.00 pm  NTU MAE	<h3>Learning Journey to NTU MAE</h3> <p>This learning journey will provide educators with an introduction to Nanyang Technological University, School of Mechanical and Aerospace Engineering and insights into navigating the STEM landscape. You will also get to visit the HP-NTU Digital Manufacturing Corp Lab. This learning journey is suitable for all teachers.</p> <p><a href="#">Register here</a> for the session.</p>
 14 Feb 2024, Wednesday  2.30 pm to 5.00 pm  Science Centre Singapore	<h3>Mathematics in STEM (Workshop)</h3> <p>Join us for this workshop where you will explore a series of STEM activities through the lens of Mathematics that can be incorporated in your lessons. See how Mathematics principles are applied in designing sustainable solutions, food preservation, cybersecurity, and infection control. This workshop is suitable for all Mathematics teachers.</p> <p><a href="#">Register here</a> for the session.</p>
 16 Feb 2024, Friday  3.00 pm to 4.00 pm  Webinar	<h3>Eating Insects – Trend or Fad (Webinar by Werms Inc)</h3> <p>The Singapore Food Agency is expected to give the green light for human consumption of sixteen species of insects. What should you know before eating insects? How can you overcome entomophobia? Join us for this online session to distinguish the facts from the myths of insect consumption. The session will cover the nutritional values and resource requirements of insects versus traditional protein sources, the history and trends of consuming insects and the local requirements for insect farms. This webinar is suitable for all teachers and STEM instructors.</p> <p><a href="#">Register here</a> for the session.</p>
 22 Feb 2024 & 28 Mar 2024, Thursday  2.30 pm to 5.30 pm  Science Centre Singapore	<h3>Designing STEM Problem Scenarios (2-day workshop by AST)</h3> <p>In this two-part workshop, teachers will learn about the design considerations for problem scenarios and the GRASP model in crafting real-world STEM problem scenarios, and engage in a hands-on activity and group discussions. This workshop is suitable for all teachers.</p> <p>Register on OPAL 2.0 [OPAL code: PED-000164]</p>
 23 Feb 2024, Friday  2.30 pm to 5.00 pm  Science Centre Singapore	<h3>Kebbi AI ML Robotic Program Workshop by Lyza</h3> <p>This workshop will take you on a journey into coding with our friendly robot, Kebbi. Learning about the latest in Artificial Intelligence (AI), Robots, Machine Learning, Kebbi GPT, and IoT. AI and Machine Learning help robots like Kebbi understand things and make smart choices. In this program, you'll learn how to teach computers using lots of data and instructions. Apply your learning to help teach Kebbi how to recognise faces and make it work better. Join us to see how fun and exciting technology can be! This workshop is suitable for all teachers.</p> <p><a href="#">Register here</a> for the session.</p>

 6 Mar 2024, Wednesday  2.30 pm to 5.00 pm  Science Centre Singapore	<h3>3D Design Fundamentals Lite</h3> <p>Roleplay in a thrilling space mission - acquiring 3D modelling skills using SOLIDWORKS Apps for Kids and delving into STEM fundamentals to design an Avatar for safe travel to Planet X in 2050! This workshop is suitable for teachers from primary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 7 Mar 2024, Thursday  3.00 pm to 5.00 pm  SC3DP @ NTU	<h3>Learning Journey to Singapore Centre for 3D printing (SC3DP) @ NTU</h3> <p>Interested to learn more about how additive manufacturing is changing the world? Join us for a visit to the SC3DP where you will learn more about the research activities of the Centre and how 3D printing is changing conventional manufacturing in the different industries. Following a presentation, participants will get to tour the laboratory facilities and get to see state-of-the-art 3D printing technologies as well as prototypes of printed samples. To find out more about SC3DP, you can access the e-brochure <a href="#">here</a>. This learning journey is suitable for educators and STEM instructors from all levels and disciplines. Participants are required to be at the venue by 2.50pm.</p> <p><a href="#">Register here</a> for the session.</p>
 7 Mar 2024, Thursday  2.30 pm to 5.30 pm  Science Centre Singapore	<h3>Intermediate micro:bit for sustainability application</h3> <p>Unlock the potential of micro:bit technology for a greener, more sustainable future as you learn to utilise breakout boards, connect external sensors, and apply micro:bit skills to address environmental challenges and promote sustainability. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 11 Mar 2024, Monday  9.00 am to 5.00 pm  Science Centre Singapore	<h3>NXplorers System Thinking tools</h3> <p>Embark on an insightful journey to unravel complex systems challenges by combining systems thinking with human-centered design - using mapping tools to uncover insights and develop impactful solutions. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>

 14 Mar 2024, Thursday  3.00 pm to 5.00 pm  Science Centre Singapore	<h3>Implementing STEM in Science Lessons to Develop Practices of Science</h3> <p>Join us for this workshop facilitated by three passionate STEM educators from Compassvale Secondary School: Mrs Preeti Kulkarni, Subject Head (Biology) and OSTA STEM Winner for 2022, Mdm Fazleen Mahmud, Senior Teacher (Biology), and Mr Ng Jun Jie, Senior Teacher (Physics). This dynamic team will share a STEM lesson on coronary heart disease that they have developed to enhance students' learning. Participants will get to experience some of the activities conducted in this lesson. Following this, participants will engage in a discussion on how they can infuse more elements of STEM in their existing lessons using the STEM Learning Experiences matrix (developed by MOE CPDD). This workshop is suitable for Secondary Science educators. Participants of this workshop will enjoy complimentary access to the Science Centre for the whole day.</p> <p><a href="#">Register here</a> for the session.</p>
 19 March 2024, Tuesday  2.30 pm to 5.00 pm  Science Centre Singapore	<h3>Small leather craft basics</h3> <p>Enjoy this workshop tailored for aspiring leather craft artisans. It provides essential knowledge about leather, design principles for creating a card holder, and practical skills for crafting small leather goods. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 20 Mar 2024, Wednesday  2.30 pm to 5.30 pm  GlobalFoundries Singapore	<h3>Experiential Learning Journey to GlobalFoundries (GF)</h3> <p>This Educators' Learning Journey at GlobalFoundries (GF) aims to raise awareness about the importance and pervasiveness of the semiconductor industry. Join us to learn more about how GF-manufactured semiconductor chips power devices across many key market segments including smart mobile phones, next-generation of automotives, home IoT devices, and many more. Participants will get the rare opportunity to visit the state-of-the-art fabrication plant and laboratories, get a glimpse into the cutting-edge global technology solutions in a world-class manufacturing facility, and interact with the directors, technical staff, and engineers. Participants will get an overview of the wafer fabrication processes and understand the various job roles at GlobalFoundries, which they can then bring back to inspire students on subjects of interest, and provide guidance for their future career choices. This learning journey is suitable for all teachers.</p> <p><a href="#">Register here</a> for the session.</p>
 27 Mar 2024, Wednesday  2.30 pm to 4.30 pm  Science Centre Singapore	<h3>Learning Journey to Science Centre Singapore</h3> <p>Join us for a sharing at Science Centre Singapore. Participants will gain some insights to how exhibitions are created (from ideation to implementation), as well as the roles of the various personnel who are involved behind the scenes on making the visitor experience seamless and engaging. This learning journey is suitable for all teachers.</p> <p>[Register on OPAL 2.0]</p>

 3 Apr 2024, Wednesday  2.30 pm to 5.00 pm  Rockwell Automation	<h3>Learning Journey to Rockwell Automation</h3> <p>Rockwell Automation is a global leader in industrial automation and digital transformation, with a strong commitment to enabling the next generation of smart manufacturing. Join us for this learning journey to gain an understanding of how Rockwell Automation runs its manufacturing plant and the various applications/methods to integrate Rockwell’s cutting-edge technology into our daily lives. You will also glean insights into their Customer Experience Centre to get a sense of how their products work together to make up a connected enterprise. This learning journey is suitable for educators and STEM instructors from all levels and disciplines.</p> <p><a href="#">Register here</a> for the session.</p>
 12 Apr 2024, Friday  3.00 pm to 5.00 pm  Singapore-ETH Centre	<h3>Learning Journey to Singapore-ETH Centre</h3> <p>The Singapore-ETH Centre for Global Environmental Sustainability (SEC) was established in 2010 as a collaboration between ETH Zurich and the National Research Foundation of Singapore. Through its programmes: Future Cities Lab Global (FCL Global), Future Resilient Systems (FRS), and Future Health Technologies (FHT), the SEC aims to provide practical solutions to some of the most pressing challenges on urban sustainability, resilience and health. Wait no longer and grab this rare opportunity to visit the SEC to learn more about the cutting-edge work that they do in translating knowledge to practical solutions to real-world problems, and tackling challenges such as the urban heat island effects through the Cooling Singapore project, sustainable food systems through the Urban Microalgae-Based Protein Production project, and mapping sub-surface utilities in Singapore through the Digital Underground project. This learning journey is suitable for educators and STEM instructors from all levels and disciplines.</p> <p><a href="#">Register here</a> for the session.</p>
 18 Apr 2024 & 16 May 2024, Thursday  2.30 pm to 5.30 pm  Science Centre Singapore	<h3>Facilitating STEM Learning Experiences Through PBL (2-day Workshop by AST)</h3> <p>Through experiential learning that incorporates customised hands-on and reflective activities, teachers will gain greater awareness of the stages of PBL and a deeper appreciation of their role as facilitators in PBL classrooms. This workshop is suitable for all teachers.</p> <p>Register on OPAL 2.0 [OPAL Code: PED-000165]</p>
 25 Apr 2024, Thursday  3.00 pm to 5.00 pm  Rolls-Royce Singapore	<h3>STEM in Aviation: Learning Journey to Rolls-Royce Singapore</h3> <p>Rolls-Royce develops and delivers complex power and propulsion solutions for safety-critical applications in the air, on land, and at sea. In this learning journey, participants will – through a mix of facility tour, presentation, and Q&amp;A – see how Rolls-Royce is committed to inspire and interest young people to pursue a STEM education or career. This learning journey is suitable for educators and STEM instructors from all levels and disciplines.</p> <p><a href="#">Register here</a> for the session.</p>

 9 May 2024, Thursday  2.30 pm to 5.00 pm  Science Centre Singapore	<h3 style="color: #E67E22;">“Beefing Up” on Alternative Proteins</h3> <p>Join us for an afternoon of culinary and sensory experience where you will get to explore the STEM in alternative proteins. Get your hands dirty in making a plant-based protein and try out different types of alternative proteins (plant-based, insect-based, fermented and cultured). Compare how these alternative proteins measure up against proteins from animal sources. This workshop is suitable for educators and STEM instructors from all levels and disciplines. If you are “game” for it, you are welcome to consume the food.</p> <p style="color: #E67E22;"><a href="#">Register here</a> for the session.</p>
 9 May 2024, Thursday  2.30 pm to 5.00 pm  Edible Garden City	<h3 style="color: #E67E22;">Growing edibles at home: Microgreens</h3> <p>Explore Singapore's agricultural journey in an urban farm tour featuring nutritiously grown food in farming systems, indoors and outdoors. Learn how microgreens are used in the F&amp;B industry, plant and bring them home to grow! This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 10 May 2024, Friday  2.30 pm to 5.00 pm  Science Centre Singapore	<h3 style="color: #E67E22;">Computational Thinking</h3> <p>Discover the exciting applications of Computational Thinking (CT) and explore its integration into a STEM Applied Learning Programme. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 4 Jul 2024, Thursday  2.30 pm to 5.30 pm  Science Centre Singapore	<h3 style="color: #E67E22;">Ageing population – challenges and solutions</h3> <p>Explore the challenges of our ageing population and discover STEM solutions to support patients and caregivers, fostering a vibrant and innovative health-focused community. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 9 Jul 2024, Tuesday  2.30 pm to 5.00 pm  Science Centre Singapore	<h3 style="color: #E67E22;">Small leather craft basics</h3> <p>Enjoy this workshop tailored for aspiring leather craft artisans. It provides essential knowledge about leather, design principles for creating a card holder, and practical skills for crafting small leather goods. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>



 15 Jul 2024, Monday  2.30 pm to 5.30 pm  Republic Polytechnic	<h3>Generative artificial intelligence (AI) and content generation</h3> <p>Unleash your creativity as you discover the remarkable ability of AI to inspire and create content, empowering you to navigate the evolving digital landscape with confidence. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 17 Jul 2024, Wednesday  2.30 pm to 5.30 pm  SBS Transit	<h3>STEM Behind Our Railway Systems</h3> <p>Step into the future of transportation as we unravel the fascinating world of STEM behind the development of a world-class railway system and delve into the innovative realm of green transportation. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 19 Jul 2024, Friday  2.30 pm to 5.30 pm  SUTD	<h3>Design Thinking and Making (user-centric solutioning)</h3> <p>Unleash your creativity and innovation as you harness the power of design thinking and digital fabrication to bring your ideas to life with an exciting working prototype. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 19 Jul 2024, Friday  2.30 pm to 5.30 pm  Nanyang Polytechnic	<h3>SMART Living Using IoT</h3> <p>Dive into the world of SMART Living IoT systems by using micro:bit IoT kits and Scratch coding to create a future where technology and creativity converge to enhance daily living. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>
 1 Aug 2024, Thursday  2.30 pm to 5.30 pm  Science Centre Singapore	<h3>Jigsaw learning on renewable energy</h3> <p>Dive into the world of renewable energy using the collaborative and interactive jigsaw learning strategy - fostering teamwork, active participation and individual responsibility. Explore ways to apply this strategy to other fun and engaging topics. This workshop is suitable for teachers from primary and secondary schools.</p> <p>For primary school teachers, register at this <a href="#">link</a>.  For secondary school teachers, register at this <a href="#">link</a>.  Please note that priority will be given to EOs from STEM ALP schools.</p>



16 Aug 2024, Friday



2.30 pm to 5.30 pm



Nanyang Polytechnic

## Microplastics in everyday life

Design a cool gadget to extract microplastics from water, or create a 'detective kit' to identify the sneaky microplastics hiding in water samples. This workshop is suitable for teachers from primary and secondary schools.

For primary school teachers, register at this [link](#).

For secondary school teachers, register at this [link](#).

Please note that priority will be given to EOs from STEM ALP schools.



3 Sep 2024, Tuesday



9.00 am to 12.00 pm



Science Centre Singapore

## Drone 101

Dive into the exhilarating world of drones, where STEM principles come to life! Learn the basics of drone technology, covering flight mechanics, navigation, and remote sensing. Elevate STEM skills through interactive activities and real-world applications! This workshop is suitable for teachers from primary and secondary schools.

For primary school teachers, register at this [link](#).

For secondary school teachers, register at this [link](#).

Please note that priority will be given to EOs from STEM ALP schools.