

CALL FOR REGISTRATION OF INTEREST TO PARTICIPATE

Registration is now OPEN...



Resident Speaker & Session Facilitator

Dr Tan Kok Siang, PhD

Principal Consultant (Science & STEM Education), SGReflect Singapore
Retired Senior Lecturer (Science Education), NIE, NTU, Singapore

Past WebSharing Topics/Themes

Session (Date)	Topic(s)/Theme(s)
#01 (23 Oct 21)	Reflective Learning
#02 (13 Nov 21)	Affective Learning
#03 (22 Jan 22)	Assessment
#04 (03 Sep 22)	Integrated Learning
#05 (31 May 23)	"Simple Science Concepts, Challenging Tasks"

Coming WebSharing Session

#06 (05 Jan 24) Adaptive & Inventive Thinking

Planned Sessions for 2024

#07 (2024 tba) School Experimental Science I
#08 (2024 tba) School Experimental Science II

[More sessions may be planned in 2024 due to the growing interest in STEM and Design-based Learning among Singaporean Science Teachers]

Repeat or Customised Sessions

(for specific educational communities or groups)

Contact koksiang.tan@sgreflect.com for requests relating to repeat sessions or sessions customized for specific groups or communities. All requested sessions will also be complimentary and zoom-based.

6TH WEB-SHARING SESSION FOR SCIENCE TEACHERS & EDUCATORS

A Pedagogical Interpretation on "Adaptive and Inventive Thinking"

(for Teaching, Learning & Assessment of Primary & Secondary School Science)

Friday 5th January 2024, 1500h to 1700h (SG, CN, HK, Perth)

Friday 5th Jan 24, 1400h to 1600h (Bangkok, Thailand & Phnom Penh, Cambodia)

Saturday 6th Jan 24, 0900h to 1100h (Kigali, Africa) | Sat 0800h to 1000h (Berlin, Germany)

On-line Session via Zoom (Complimentary for Registered & Invited Participants)

Register at: <https://shorturl.at/blFPR>

or send an email directly to koksiang.tan@sgreflect.com

An International Science Education &
Teacher Professional Development Project by



Resident Speaker's Synopsis

In September 2023, the [Singapore's Ministry of Education](#) announced a revised 21st Century Competency Framework that emphasizes "**adaptive and inventive thinking, communication, and civic literacy**". Drawing upon Dr Tan's extensive three decades of practice and research in school science, he will provide a professional pedagogical interpretation of what '*adaptive and inventive thinking*' entails. He will also offer suggestions for science teachers on the use of curricular and assessment resources in designing thinking tasks and hands-on learning opportunities that foster the development of students as '*adaptive and inventive*' thinkers. The insights and ideas shared may also promote STEM learning habits among students and support assessment practices, particularly in lesson-based formative assessment and the periodic school-based written and performance-based weighted assessment for students

About the Speaker and Session Facilitator

Dr Tan Kok Siang is a retired science teacher educator and academic from NIE Singapore. He has industry experience as a Quality Assurance/Process Chemist in the pharmaceutical industry before becoming a teacher. He is now a Principal Consultant working on local and international educational projects relating to Science Inquiry Learning, Assessment Practices, and STEM/STEAM Education. He has taught secondary school science for 13 years and done research and practices on reflective learning, critical thinking, science inquiry, and assessment. He now teaches and conducts Science and STEM programmes for teachers and students locally, regionally, and internationally.

Areas of research and practice: <https://sgreflect.com/professional-background>

Given the current interest among teachers in '*Adaptive and Inventive Thinking*' and integrating *STEM Learning* into the school science curriculum, the 2024 WebSharing sessions will feature School Experimental Science and Design-based Learning Experiences. For the most recent updates and announcements regarding these sessions, please visit <https://sgreflect.org>.



“Singapore Invention Convention”

Guest Speaker: Ms Nancy Soon

Convenor, Pratt & Whitney Singapore Invention Convention (Annually, 2021 – 2023)
 Founder & Director, Stemie Advantages Ltd, Singapore
 Executive Director, Thinking-Plus International Pte Ltd
 Executive Director, Helen O'Grady Asia Pte Ltd

On-line Session via Zoom (Complimentary for Registered & Invited Participants)

*An International Science Education &
 Teacher Professional Development Project by*



Guest Speaker

Ms Nancy Soon

Convenor for the Pratt & Whitney
 Singapore Invention Convention, 2023
Exec Dir, STEMIE Advantages, Singapore
Exec Dir, Thinking-Plus International
Exec Dir, Helen O'Grady Asia Pte Ltd
Co-Founder, IDE Academy Pte Ltd

About the Pratt & Whitney Singapore Invention Convention

Since 2021, Stemie Advantages has been organising the Singapore Invention Convention together with local and international partners. The Convention provides opportunities for every participating child to showcase their inventive ideas to the public, which include professionals and practitioners in the industry and the community. <https://ideacademy.sg/pwsic/>

About IDE Academy Pte Ltd

IDE Academy is a member of the InventEd Global Community of Invention Educators established by Lemelson Foundation. Together with LDR Technology, IDE Academy organised the 2nd Singapore Open Nationals Invention Convention for students from Grades K - 12. The first virtual convention attended by 135 participants from 4 countries - Singapore, Japan, Thailand and Vietnam. <https://ideacademy.sg/>

Guest Speaker's Synopsis

In this session, Ms. Nancy Soon, the Guest Speaker and Convenor of the 2023 Pratt & Whitney Singapore Invention Convention (PWSIC), will discuss the efforts undertaken in the private sector, particularly in education and the STEM industries. These efforts aim to provide opportunities for young inventors from diverse nations across the region and globally, allowing them to present their inventive ideas at this annual convention. IDE Academy collaborates with STEMIE Advantages each year to host the Pratt & Whitney Singapore Invention Convention, celebrating inventors and entrepreneurs in STEM education aged 5 to 19. Participants showcase their remarkable inventions and receive feedback for further enhancement. Due to the challenges during the Covid pandemic, the Convention had to transition online for safety reasons. However, as restrictions ease, the Convention now welcomes participants from various regions, including Thailand, Vietnam, and Japan to showcase their inventions in-person, here in Singapore. Outstanding participants stand a chance to receive patent opportunities and various awards at the Invention Convention. Moreover, our young inventors and entrepreneurs have garnered recognition in local media and have been acknowledged by ministers in Singapore!

About the Guest Speaker

Ms Nancy Soon is Co-Founder of the IDE Academy. She holds the role of Executive Director at STEMIE Advantages, the organization collaborating with American aerospace manufacturer Pratt & Whitney to annually organize the Singapore Invention Convention (PWSIC) since 2021. Under her stewardship, the PWSIC has successfully attracted budding student inventors (ages 5-19) including from Japan, Vietnam, Indonesia, the Philippines, and Singapore. Ms Soon holds a BSc degree in Liberal Arts and Sciences / Liberal Studies from Excelsior University, USA, along with a Diploma in Training and Development from the University of Leicester, UK. Her professional journey is adorned with a diverse array of entrepreneurial ventures, holding simultaneous leadership and training roles at esteemed institutions such as Helen O'Grady Drama Academy, Drama Kids International, Grady Bear Adventures, and Thinking-Plus International. Earlier in her career, she garnered valuable experience by working with distinguished companies and organizations, notably spending 12 years at IBM, where she held various leadership positions.

<https://www.linkedin.com/in/soonnancy/>

Register at: <https://shorturl.at/bIFPR>