

PART I: DETAILS OF YOUR SCHOOL

1. Name of your school: Kranji Secondary School
2. Full address: 61, Choa Chu Kang Street 51
3. Postcode: 689333
4. Country: Singapore
5. School's telephone number (country code+city code+telephone number): +65 6766 2464
6. School's Email Address: Kranji_SS@moe.edu.sg
7. Name of the Head Master/Principal/School Director: Goh Soon Hoe
8. Name of the Teacher Coordinator: Tan Chee Wee Desmond
9. Email address of the Coordinator: tan_chee_wee_desmond@moe.edu.sg
10. School website (if available): <https://kranjisec.moe.edu.sg/>
11. Educational level (Such as Kindergarten 1 to Grade/Year 9): Grade 8 to Grade 12
12. Total number of teachers in your school: 79
13. Approximately number of teachers participated in this programme: 48
14. Total number of students in your school: 1,108
15. Approximate number of students participated in this programme: 595

PART II: INFORMATION ABOUT THE SCHOOL'S PROGRAMME

The information of part II from no.1 to 13 should be no longer than five (5) pages long of A4 in total. The information should be written in Times New Roman/Calibri font, font size 11.

1. Title of the school's initiative

The World is my Classroom: Redefining Learning Experiences during COVID-19

2. Summary of the initiative (a half page of A4)

The Covid-19 pandemic resulted in unprecedented disruptions to students' school experience in Singapore. The safe management measures helped ensured safety while learning continues, but had also led to reduced physical social interactions and limited learning opportunities where lessons are confined largely within school premises or from home. All these limited the richness of students' learning.

The school strategised and redesigned our learning experiences by *stepping up* and leveraging on ICT affordances and *stepping out* to form new strategic partnerships, Kranji Secondary redefined our learning approach in creating "The World is my Classroom" initiatives; listed below are some examples.

- a. Immersive Learning Experiences in the Classroom – Infusing Virtual Reality in teaching and learning of History and Science lessons allow our students to view environments or periods that they otherwise would not be able to see or experience in person due to the pandemic.
- b. Re-establishing Global Classrooms – Establish new educational partners in Japan and countries in Asia for conference discussions and exchange on shared experiences of the pandemic and environment outreach. This ensures continuity of 21CC outcomes even when international travel is not possible.
- c. Activating Student Agency in promoting Cyber Wellness and Environmental Outreach – Our students continue to champion and act as agents of change in facilitating online training on Cyber Wellness to student ambassadors in West Zone schools. Created new learning platforms with ASEAN Studies Centre from the Institute of South East Asian Studies (ISEAS), Republic Polytechnic and NParks for our students to champion agendas on sustainable living and climate change.

3. Objectives/goals of the school's initiative

The objectives of the "The World is my Classroom" programme are

- a. Building teacher capacity to explore emerging educational paradigms and new possibilities in teaching and learning.
- b. Enriching curriculum aims for global awareness to incorporate international and intercultural dimensions into internationalisation experiences.
- c. Creating an enriched and immersive learning environment for students through ICT affordances.

4. Period of the time when the initiative was/has been started

- a. Immersive Learning Experiences in the Classroom
 - Use of VR in Science Classroom (2020 - present)
 - Historical Investigation Virtual Reality Experience (HIVE) (2020 - present)
- b. Re-establishing Global Classrooms
 - Virtual school exchange with Ginowan Senior High School (2020 - present)
 - International Conference for High School Students (2020 & 2021)
- c. Activating Student Agency in promoting Cyber Wellness and Environmental Outreach
 - Cyber Wellness Online Workshop for West Zone Secondary Schools (2017 - present)
 - Kranji Marshes Virtual Trail (2020 - present)
 - 'Living in Harmony with Nature and the Planet' online environment seminar series (2020 - present)

5. Activities (strategies/activities of implementation, and brief information of each activity)

a. Immersive Learning Experiences in the Classroom

1. Use of VR in Science Classroom. VR digital resources complement learning experiences that were created on Singapore's Student Learning Space (SLS) to deepen students' learning on scientific modelling. With the VR videos and manipulatives used as learning triggers, students collaborate to build knowledge of abstract scientific concepts through SLS. Such VR learning experiences have promoted self-directed learning opportunities for Biology students to explore structures in the human respiratory system.

Alignment to UN Sustainable Development Goals (SDG): Goal #4 (Quality Education)

2. Historical Investigation Virtual Reality Experience (HIVE). A virtual field trip was built using Google Earth with resources such as 360° scenes and 3-dimensional artefacts to replicate life and living in Singapore's kampongs in the 1960s and 1970s. The virtual learning experience was created to ignite students' interest in learning and to promote better knowledge retention. Students will be able to access the virtual field trip using their mobile phones and engage in an immersive learning experience anytime, anywhere and at their own pace. This also ensures continuity in learning for Historical Investigation in History education in spite of the pandemic.

Alignment to SDG: Goal #4 (Quality Education) and #11 (Sustainable Cities & Communities)

b. Re-establishing Global Classrooms

1. Virtual School Exchange with Ginowan Senior High School. Virtual exchange with Ginowan Senior High School, in Okinawa, Japan enables students from both schools to collaboratively engage each other in creating knowledge, share ideas and socially interact to develop global awareness and cross-cultural literacy. Flipgrid and Google classroom were used for asynchronous activities, in addition to bi-monthly live conferencing on the Zoom platform. Focus for 2020 was on cross-cultural understanding and appreciation. In 2021, students engage in research and discussions of the different Sustainable Development Goals.

Alignment to SDG: Goal #4 (Quality Education) and #17 (Partnerships for the Goals)

2. International Conference for High School Students. Students embarked on both individual and collaborative research work in preparation for the conferences: World Peace (SDG Goal #16) in 2020 and Environment (SDG Goals #11 & #13) in 2021. In the process, students exercise their creativity, problem-solving abilities, information reasoning and communication skills when they are engaged in various forms of digital collaboration.

Alignment to SDG: Goal #11 (Sustainable Cities & Communities), #13 (Climate Action) and #16 (Peace, Justice and Strong Institutions)

c. Activating Student Agency in promoting Cyber Wellness and Environmental Outreach

1. Cyber Wellness Online Workshop for West Zone Secondary Schools. Kranji Secondary's cyber wellness ambassadors carried out internal scans of cyber wellness needs of students, and prepared an action plan for their school's cyber wellness programme to promote cyber security and student mental well-being. They facilitated the training of student participants from West Zone Secondary Schools to build their capacity to champion cyber wellness efforts in their respective schools.

Alignment to SDG: Goal #3 (Good Health and Well-Being)

2. Community in Nature (CIN) Ambassador Programme. The programme is established with the aim to develop students to become Green Ambassadors who will be able to confidently lead learning journeys trails for students and the community. With in-person guided trails restricted during the Covid-19 pandemic, our students have developed a 360° virtual package of the Kranji Marshes (a 56.8-hectare freshwater marshland) so that they can continue to advocate for biodiversity conservation through outreach to the larger community.

Alignment to SDG: Goal #4 (Quality Education), #13 (Climate Action) and #14 (Life Below Water)

3. Living in Harmony with Nature and the Planet Environment Seminar. Partnering with Republic Polytechnic since 2020, Kranji Secondary hosted webinars on "The Living in Harmony with Nature and the Planet Environment Seminar" to cultivate environmental consciousness among youths on the importance for harmonious living with greenery as Singapore moves towards transforming into a "City in Nature". Guest speakers from Tropical Marine Science Institute and National Parks Board

were invited to share with participants from the primary and secondary schools their expert knowledge on marine life and the work done on bees in Singapore.

Alignment to SDG: Goals #13 (Climate Action), #15 (Life on Land) and #17 (Partnerships for the Goals)

4. ASEAN discussion series. In partnership with ASEAN Studies Centre, a research think tank with the Institute of South East Asian Studies (ISEAS) in Singapore, we organised the “ASEAN Youths in Climate Action”, a four-part webinar series of discussion sessions for 65 Grade-10 students from four local schools in 2021. Student participants interact and hold discussions with the academia, researchers and youth leaders in this region to have a greater understanding and exposure towards ASEAN. Aligned to SDG #13, this initiative allows students to build their capacity to take actions towards climate issues in their communities in the near future.

Alignment to SDG: Goal #13 (Climate Action) and #17 (Partnerships for the Goals)

6. Teaching and learning approaches/strategies that the school has integrated for this school initiative

The school employs a combination of synchronous and asynchronous teaching approaches as follows:

- Individual learning activities. Learning activities are planned to allow each student to be responsible for his/her own learning and be a reflective learner. Examples of individual tasks include conducting research on given topics; self-directed learning using a structured resource package; creating individual products such as presentation and Flipgrid video recordings, etc.
- Group activities. Students to work in pairs or small groups (3-4 students) in a collaborative and supportive environment physically and virtually. These activities aim to allow for better interdisciplinary learning, and collaborative problem solving where individual students actively and responsibly work towards a shared goal. Examples of group activities include researching on sustainability issues in different ASEAN countries; group presentation on assigned SGDs or research areas, etc.
- Whole class instructions (Flipped Classroom). Whole class instructions are usually used to address student needs and to extend learning through a flipped classroom approach. Pre-class activities enable students to leverage on their personal learning devices to learn key concepts in a self-paced manner, followed by face-to-face time in class for more collaborative activities to further extend students' learning and application. Examples of such instructions include challenging students with open-ended discussion questions that promote constructive dialogue and discourse in Google Classroom and Google Suite applications (i.e. Google Documents and Slides).

7. Participation of community and parents in the school initiative

a. Immersive Learning Experiences in the Classroom

- Parents were invited to experience the Science and History virtual reality resources together with their child to experience learning in an immersive classroom.

b. Re-establishing Global Classrooms

- Parents support our students to extend their learning beyond the classroom. For example, students in the e-school exchange programme are encouraged to record videos of their own residential neighbourhood with their parents for their Japanese classmates as part of showcasing the cultural diversity between Singapore and Japan.
- In order to provide students with authentic realities of climate-related challenges on the ground, community and/or grassroots leaders from different ASEAN countries were invited to share with our student participants their own experiences of involving their local communities and NGOs in environmental efforts.

c. Activating Student Agency in promoting Cyber Wellness and Environmental Outreach

- Our school establishes a partnership with National Parks Board (NParks), a statutory board of the Government of Singapore and responsible for managing the urban ecosystems in Singapore, to build capacity of our teachers and Green Ambassadors with the knowledge and skills that will allow them to effectively communicate Singapore's biodiversity and nature conservation-related topics to the public. NParks has worked closely with the schools to enhance the Kranji Marshes Biodiversity Trail Booklet, which accompanies our Kranji Marshes virtual biodiversity trail package.

- Our Cyber Wellness Student Ambassadors have been facilitating workshops on cyber wellness related issues for the West Zone schools. The ambassadors are empowered with the knowledge and skills regarding issues such as combating online addiction and recognising fake news. This year, the ambassadors also facilitated Zoom breakout discussions with ambassadors from various schools to have a more intimate discussion on cyber wellness issues. In our two-part workshop, the ambassadors of various schools collaborate in the second session to share their good practices.

8. Monitoring and evaluation mechanisms

At each programme level, the programme in charge uses Dr. Ruben's SAMR model to guide teachers about the role of technology in supporting learning of their students, and in running their programmes and resources. Feedback from students and key stakeholders are obtained to help design better learning activities for students.

For external partnerships with organisations and school partners, the school uses the Partnership Assessment Toolkit to evaluate the of the programme and partnership processes. This is done to ensure a sustainable and mutually beneficial relationship for our partnership ventures.

9. Effectiveness of the school initiative to learners, teachers, families, and community

Capacity building beyond Kranji Secondary was achieved when the HIVE and e-Internationalisation teams were selected to present at the Ministry of Education Teachers' Conference and ExCEL Fest 2021 with fellow educators in June 2021.

In addition, the considerations and processes in designing 'The World is My Classroom' programme are shared with the wider community beyond the school. For instance, an article was published on *Schoolbag.SG*, an online news portal by our Education Ministry for parents, students and fellow educators to read about our school's efforts in providing an enriched internationalisation learning environment for our students. Our exchange programme with Ginowan Senior High School was also reported in *Okinawa Times* on 11 June 2021, on our students collaborating in discussions on the different Sustainable Development Goals.

10. Plan for future

a. Immersive Learning Experiences in the Classroom

Building on the experience and good outcomes achieved from using VR in the classroom, the school is expanding the use of VR in other school's initiatives as follows:

- Geography Investigation – students to conduct virtual field investigation on the impact of tourism in popular tourist destinations in different parts of the world. This will be hosted on Kuula – a 360° Virtual Tour platform.
- Virtual makerspace studio set up – The school plans to set up a dedicated room to support teacher and student creation of digital materials. This would allow teachers to experiment with emerging digital teaching tools and students to create immersive digital outputs for learning.

b. Re-establishing Global Classrooms

Building on the experiences and successes in 2020 and 2021, Kranji Secondary is committed to sustain our partnerships with our overseas schools and organisations. In 2022 and beyond, the school is planning to scale up our e-Internationalisation efforts in the following ways:

- Expand virtual school exchanges with more overseas schools in Asia. We have established a partnership with Tu Cheng High School in Chinese Taipei and both schools are finalising the plans for the exchange to commence in September 2021. Kranji Secondary is continuing to establish similar partnerships with school from the region in 2022.
- Organise an international conference in 2022 with various schools in Asia on empowering youths on sustainability living, which is aligned to various SDGs (6, 7, 9, 11, 13 and 17). Asian schools will also be invited to present papers at this conference.
- Scale up the discussion series with ASEAN Studies Centre to invite Grade 10 student participants from all secondary schools in Singapore in 2022, up from the current four schools in 2021. In 2023 and beyond, there are plans to engage students from ASEAN schools in this series.

c. Activating Student Agency in promoting Cyber Wellness and Environmental Outreach

Extending our current successes in trail creation, Kranji Secondary is committed to developing students from other secondary schools in trail creation of nature areas near their schools through capacity building and resource building. Our Green Ambassadors are striving to work on advocating other sustainability living initiatives beyond biodiversity conservation, for instance sustainable food production. The Biodiversity Learning Hub within the school also serves as an experimental ground for students to practice Design Thinking, for instance the development of bee hotels for establishment of a bee-friendly habitat.

11. Interrelationship of the school's programme with other Sustainable Development Goals (SDGs) (Please refer to page 2 in the Information Note or <https://sustainabledevelopment.un.org/sdgs>)

The school's "The World is my Classroom" programme does achieve the intended outcomes in the respective SDGs as follows:

- Goal #4 (Quality Education): The use of ICT, equipped with personal learning devices with broadband access from home, provides an inclusive education for our students in and out of the classrooms, even when schools are closed due to the pandemic. The academic and interpersonal skills that students developed is one instance of promoting lifelong learning and building one's character.
- Goal #11 (Sustainable Cities and Community), #13 (Climate Action), #14 (Life below Water) and #15 (Life on Land): Sustainability is the major theme that ties each of the three components together. Students have the opportunity to deepen their understanding of and challenges of sustainability in the different enrichment activities and events.
- Goal #17 (Partnerships for the Goals): Establishing and sustaining partnerships with local and overseas institutions is the main driving force behind this programme. Our work done in providing the wide range of learning activities and platforms for our students have help provide quality learning experiences for our students, and to build capacity for all stakeholders (students, educators, parents and the community).

12. Link(s) to the information of school's initiative in social medias such as facebook, website, youtube

1. Schoolbag article published by the Ministry of Education, Singapore (<https://www.schoolbag.edu.sg/story/the-world-in-my-classroom>)
2. School exchange article published in Okinawa Times (<https://c.okinawatimes.co.jp/index.html?kijiid=OTPK20210611A001500010L238001#>)
3. Kranji Secondary School Internationalisation Programme (<https://kranjisec.moe.edu.sg/special-programmes/internationalisation-programme>)
4. Event publicity on social media (https://www.instagram.com/p/CMM4ed3Be_I/?utm_source=ig_web_copy_link)
5. Participation in International Conferences (Organiser website) (<https://supratarka.org/int-conference>)
6. 360 Immersive Trail of Kranji Marshes (<https://kuula.co/post/n1/collection/7YRd9>)
7. Living in Harmony with Nature and the Planet Environment Seminar Post-Event Publicity (https://facebook.com/story.php?story_fbid=156232256479067&id=100062768802917)

13. (Optional) List of supporting documents such as a copy of the school operational plan or school management plan, action plan, learning/teaching materials, lesson plans, samples of student worksheet, manuals, etc.

If the supporting documents are in the local language, please provide a brief description in English language.

Maximum of three (3) supporting documents can be submitted with this submission form.

Document 1) Ginowan-Kranji e-School Exchange
Document 2) ASEAN Youths in Climate Action
Document 3) Student Agency for Environmental Outreach

Photos related to the activity/programme (Maximum of five (5) photos with captions in English)



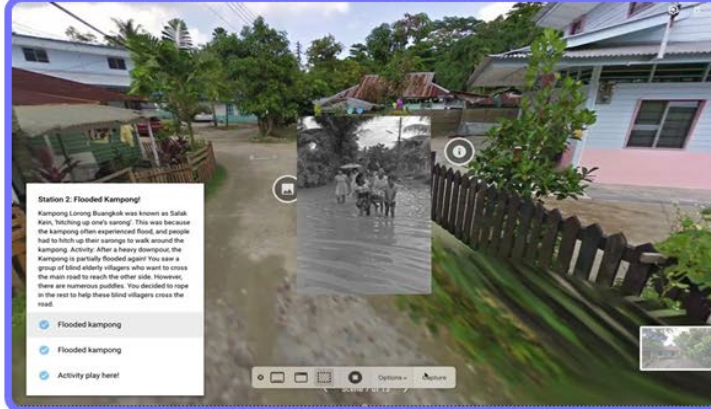
Immersive Learning Experiences in the Classroom



The World is My Classroom



Historical Investigation Virtual Reality Experience (HIVE)



Use of VR in Science Classroom



STATION 4



Make a comparison between the kampong and HDBs in the background! What are some similarities and differences?

Click and drop the options provided to match each cell structure to its respective function.

HINT

Cell structure	Function
<input checked="" type="checkbox"/> cell membrane	Controls the movement of substances into and out of a cell
<input checked="" type="checkbox"/> cell wall	Protects and supports the entire cell

Learning is fun when students immersed themselves in a Virtual Reality History and Science lesson.

Re-establishing Global Classrooms

2020 and 2021 International Conference for High School Students, Japan and Asia

Towards World Peace

International Conference for High School Students 2020,
Organised by Supratarka
6 September 2020 via Zoom

- Through experiences of the threat of Corona virus, why do you think we need world peace?
 - How do we develop world peace after the threat of Corona virus?
- <https://supratarka.org/int-conference>



Participants from Japan, Sri Lanka, Philippines, Singapore

Various Schools (Okinawa, Japan): Parakramasabhu National School (Sri Lanka), Centaro A. Alben Memorial National High School (Philippines, Mindanao, Philippines), Kranji Secondary School (Singapore)

Propose a Plan which is Good for the Earth

International Conference for High School Students 2021

Organised by Supratarka (Okinawa, Japan)

23 July 2021 via Google Meet



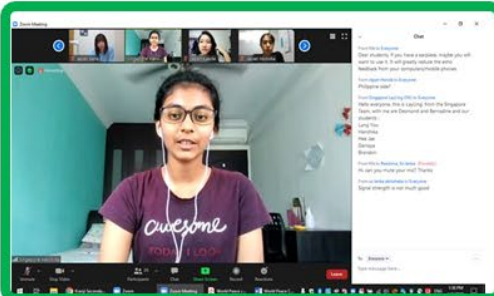
Youth Participants from 3 Countries

Various Schools in Japan, Tu Cheng High School and Kranji Secondary School

Year-long online cross-cultural exchange since 2020 through Flipgrid and Zoom



The World is My Classroom



Malay cuisines

- Traditional kush**
There are many different types and colours of Malay kush. One example is "kush lapis" which is a steamed cake with different colourful layers. Another example is "ondoh-ondoh" which is a sweet glutinous rice ball filled with liquid palm sugar and covered in coconut bits.
- Satay**
It is a skewered and grilled meat (usually chicken or beef) served with peanut sauce to dip in. The meat is usually barbecued over charcoal fire. It is quite similar to the Japanese yakitori!



The pandemic did not deter our students from obtaining an internationalised experience with our overseas partners.

Activating Student Agency in Promoting Cyber Wellness and Environmental Outreach



The World is My Classroom

Living in Harmony with Nature and the Planet Seminar

Appreciation to Guest Speakers

Co-Organized by **KRANJI SECONDARY SCHOOL** and **REPUBLIC POLYTECHNIC**

Living in Harmony with Nature and the Planet
Online Seminar via Zoom on 16 April 2021

Attended by 394 Teacher and Student Participants from Republic Polytechnic and 30 Secondary Schools.

KRANJI MARSHES VIRTUAL TRAIL 2021
Hosted by Sec 3 Green Ambassadors
29 July 2021 via Zoom

Kranji Marshes Virtual Trail



Sea level rise
Panama: Climate change could force out entire island indigenous community

On front line of climate change as Maldives fights rising seas

3) There's much to discover about bees!
40 new records over the last 10 years

Photo: NUS IDL

Biodiversity Guided Walk
by Kranji Secondary School

This booklet belongs to

Kranji Marshes Edition

Our Applied Learning Programme

The Applied Learning Programme in Kranji Secondary School aims to spur innovations for sustainable living amongst our student community in their chosen areas of interest. Through our Applied Learning Programme, students acquire design thinking and critical thinking skills and apply them to bring about innovative green solutions to improve our community. Students champion and take action towards Singapore's sustainability goals as eco-warriors.

This biodiversity learning trail package is the centerpiece of the Green Ambassadors' advocacy efforts to bring about biodiversity conservation in Singapore, contributing towards our City in Nature vision. The Green Ambassadors aim to inspire action for conservation by bringing to awareness the unique features of our natural heritage by engaging participants' senses in nature and learning with an inquiry approach. In the trail, our Green Ambassadors lead and facilitate learning of biodiversity using thinking routines.

Through the biodiversity learning trail, the Green Ambassadors hope to raise awareness of the rich flora and fauna that is treasured within Kranji Marshes.

Sustainability starts from young, and it starts from me.

Activating Student Agency in Promoting Cyber Wellness and Environmental Outreach



The World is My Classroom

WHY IS TIK TOK SO POPULAR AND ADDICTIVE?

1. Infinite scroll.
2. Short and easy to digest clips.
3. Clips about everything from dancing to singing.
4. Suitable for all ages.

ADDICTION?

WHY SO POPULAR? Tik Tok

Video call participants: Linda Goh, 292 Bryan Tan, Fariya Group3, Benjamin Leong, Anne

(Group 6) Which online platforms do you enjoy using and why?
Type your name as the title as we will be collating points later!

Sharing Column	Column 1	Column 2	Column 3
<p>Please read first Student participants, please add on to this column!</p> <p>Simply share by typing your name as the "title", then state the online platform you enjoy using and the reason why.</p>	<p>Nettiara Eldyna I think one of the app that I enjoy alot is tiktok bec it has a way that we can exercise ourselves by dancing</p>	<p>Bao Anh I enjoy using reddit because I can join communities of people that have the same interests as me</p> <p>Trisha I like to use Instagram to check my friend's stories and posts and watch live videos of my celebrities.</p> <p>I like to use tiktok to watch some of the tiktokers videos</p>	<p>annabelle I like using tiktok as it keeps me entertained, many different creators on the app and there's many different kinds of content to keep me from being bored</p> <p>Shane Ng I like using tik tok as there are funny content and some memes as well and get away from boredom</p>

Cyber Wellness Online Workshop for West Zone Secondary Schools



My Role as a Cyber Wellness Ambassador

- To utilise the S.U.R.E framework to verify possible Fake News.
- To stop the communication of Fake News, when I have doubts.
- To serve as the main gatekeeper for preservation of Cyber Wellness in all platforms that I am in.
- To serve as a intermediary bridge between my peers and my teachers, when I come across suspicious news.

S.U.R.E Method(How to spot Fake News)

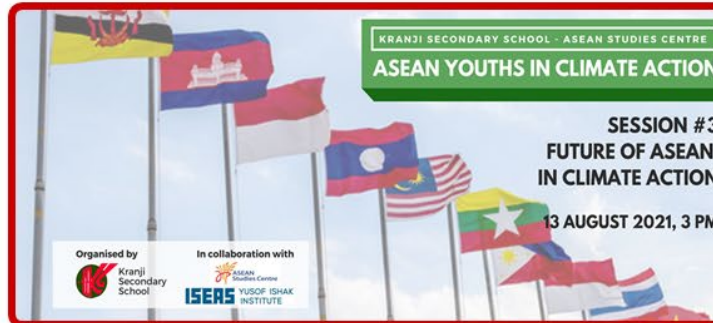
- 1 Source**
Look at its origins.
Is it trustworthy?
Make sure the source of information is credible and reliable.
- 2 Understand**
Understand what you are reading.
Search for clarity.
Look for facts rather than opinions.
(National Library Singapore, 2020)
- 3 Research**
Dig deeper.
Go beyond the initial source.
Investigate thoroughly before making a conclusion, check and compare with multiple sources.
- 4 Evaluate**
Find the balance.
Exercise fair judgement.
Look from different angles - there are at least 2 sides to a story.
(National Library Singapore, 2020)

Our students, as digital natives, have the responsibility to positively influence people in and out of cyberspace.

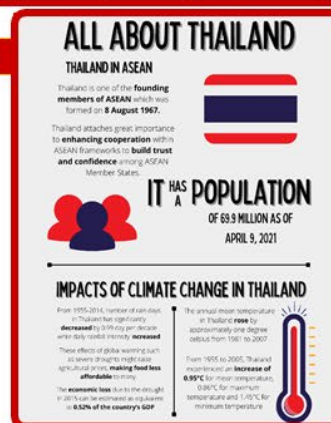
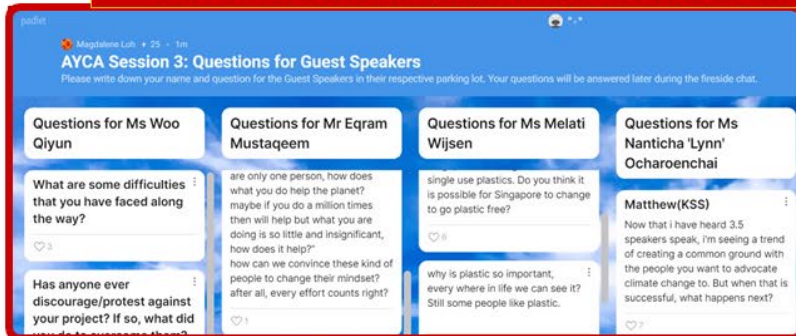
Activating Student Agency in Promoting Cyber Wellness and Environmental Outreach



The World is My Classroom



ASEAN Youths in Climate Action, in partnership with ASEAN Studies Centre



The Future World is for our students to create, one step at a time, from Singapore to the world.