

Fostering Interest in Science – DIY Cosmetics

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According to data from the Ministry of Education of Malaysia in 2022, there was a decline in the percentage of upper secondary students participating in the science, technology, engineering, and mathematics (STEM) stream, decreasing from 45.2 per cent to 40.94 per cent between 2017 and 2022. As the Ministry of Science, Technology and Innovation (MOSTI) of Malaysia has set a target for Malaysia to be in the top 20 countries in the world in terms of economy, people's well-being and creativity and innovation by 2050, MOSTI aims to nurture an interest in STEM from an early age. Deputy Minister Datuk Arthur Joseph Kurup stated, "MOSTI is committed to making science an interesting topic for every individual regardless of age. In order to support MOSTI's commitment in Popularising Science and Humanising Technology as well as promoting innovation, the National Science Week is now being held from April until November 2023."

From August 21st to 23rd, 2023, the **Global Young Academy (GYA)** collaborated as a strategic partner led by Associate Professor Chan Siok Yee and Dr Sri Fatmawati in a series of science outreach programs known as the Borneo Science Adventure Tour Series 1. These programs were held in three rural districts of Sabah state, East Malaysia, including Kota Marudu, Pitas and Kudat. The initiatives were organised by the Academy of Sciences Malaysia (ASM), an agency under the MOSTI of Malaysia with the support of the Sabah MOSTI, Sabah State Education Department and District Office. These programs, which welcomed over 500 students, ran from 8 am to 5 pm and were open to the public free of charge.

The main objectives of the programs were to cultivate science and raise awareness of the local community's awareness of the importance of Science, Technology and Innovation (STI) in everyday life. They also aimed to create a learning ecosystem that is conducive to the local community and students, to cultivate innovative and entrepreneurial minds among local communities in rural areas and to encourage a culture of social innovation through local natural resources as well as unearthing talent for social innovation.



DIY kits which made up of natural ingredients and recyclable materials.

In particular, GYA members and project assistant led a STEM activity focused on hands-on cosmetic making, titled “DIY Cosmetics”. Students were provided step-by-step guidance to create lip scrubs and lip balms/sticks using DIY kits composed of natural ingredients and recyclable materials. Information on the safe use of cosmetics was distributed through pamphlets in both English and the local Malay languages. The DIY cosmetic activity received an enthusiastic response from both students and teachers. In a brief interview, a local school teacher named Humaira expressed her happiness at seeing students engaged in hands-on experiments through such programs, as there were limited opportunities for hands-on learning in the usual school curriculum due to limited resources. She further noted that with such a simple DIY activity, she could replicate the experience in her classroom.

Feedbacks obtained from the students were positive. The mean score of 4.37 was obtained out of 5 for interest in the specific station hosted by the GYA members. Out of these, 73% particularly rated the preferences for hands-on activity. When respondents were asked about possible improvement, responses such as “*Mau lagi program macam ini* (translate: we want more programs like this)”, “*Sudah bagus* (translate: already very good)”, were obtained.

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<https://borneotoday.net/mosti-targets-malaysia-in-worlds-top-20-in-economy-peoples-well-being-and-innovation-by-2050-arthur/>

<https://youtu.be/WHjT7cGrY4s>



Video summary.



From left to right: Xin Yi Teoh (project assistant of GYA), Rana Sejare, Reem Abou Assi, Sri Fatmawati (member of GYA) and Siok Yee Chan (member of GYA) at the DIY Cosmetics booth.



Mixing process in preparing lip balm.



Lip balm prepared by high school students.



High school teachers were also involved in the making of lip balm.



Briefing and hands-on sessions with the students.



Students presented their DIY lip scrub and lip balm.



Group photo session on the third day (23rd August 2023) of Borneo Science Adventure Tour Series 1 at Hakka Kudat Hall.