

# Science of the ordinary

Students take part in science workshops run by NUS and make surprising discoveries. NURUL IIMAN SAID reports

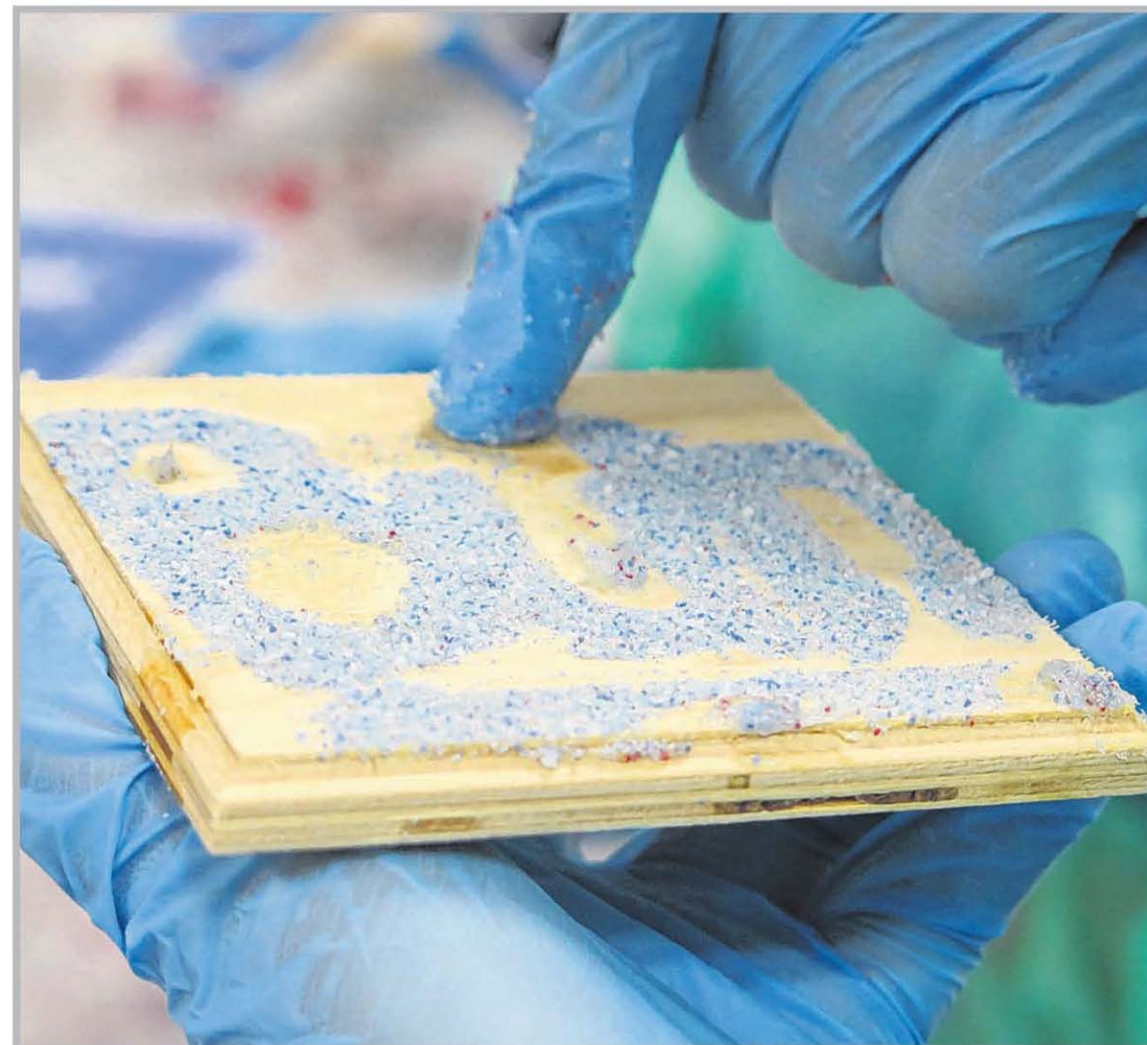
**T**his was no boring science lab lesson. Playing with sand and slime made this group of Teck Whye Secondary students burst into giggles.

Trying experiments led by undergraduates from the National University of Singapore (NUS) Faculty of Science, through a series called Surprising Science, some students even declared that they never had so much fun in school before.

The lectures were organised by the faculty's Science Demonstration Lab. The series, which is funded by Dow Chemical Pacific (Singapore)'s donation of US\$50,000 (S\$68,000), aims to spark greater interest in science among secondary school students.

The three-hour-long lectures showed students the science behind everyday items, from keeping baby bottoms dry to what makes water repellent paint.

The workshops were conducted for five secondary schools from Feb 26 to March 31, with about 20 attendees from each school.



Having fun with sand art by spreading hydrophobic sand on a wooden block smeared with petroleum jelly. The mixture which sticks together, completely repels water when dipped in the liquid, leaving only droplets of water that roll off. ST PHOTO NURUL IIMAN SAID

The students from Teck Whye, including 15-year-old Emily Chin and 16-year-old Bun Ket Jun, put on green lab coats and goggles, and took turns to blow bubbles with either a glycerine or starch mixture to test how long they could last without popping.

"It's pretty amazing, like the stuff we see in daily life, we cannot imagine them being related to science,"

said Emily, who is in Secondary 3 and professes a deep love for the subject.

But it was the slime experiment which was the favourite of everyone, including undergraduate facilitator Rachel Goh.

White glue was mixed with a sodium borate solution in a Ziploc bag and kneaded. The result? A slimy mixture that hardens when pressed, but turns gooey when left alone.

"I love this experiment because it is just a very simple concept with a very obvious effect," said Miss Goh, 21, who is a second-year student at the Faculty of Science and is keen on a career in teaching.

When the white glue was mixed with the sodium borate, long strings of molecules formed.

When pressed, the strings of molecules were squeezed closer together, making the slime firm. When left alone, the mixture became gooey again.

Another experiment, called Hydrophobic Sand Art also charmed these curious teens. They created colourful sand designs on wooden blocks smeared with petroleum jelly.

Their facilitator later dipped one of their blocks in a small tank of water. The sand design remained dry and intact.

This particular experiment showed how hydrophobic materials – which have been chemically treated to stay dry – could be used to create products like water-repellent paint.

"Through this collaboration with NUS, we want to stimulate the curiosity of our young, to have them think about the science behind daily things," said Ms Suiniaty Basirun, the country manager at Dow Chemical Pacific (Singapore).

Teck Whye science teacher Wang Yiwen, 32, said that the fun experiments would contribute to the students' willingness to learn.

"To do well, interest must be there; if not they won't be keen to learn anything," she said.