Science challenge

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ON the surface, we look completely different from one another, but at a genetic level, all humans are the same.

In an attempt to prove this point, one of the experiments conducted during the semi-finals at the National Science Challenge (NSC) 2014 had the contestants extracting DNA from various animal species and testing them to identify which group they belong to.

There were five blood samples provided to the contestants, three of which belonged to people of different races.

Once analysed, the contestants discovered that all three human samples were the same.

"The take-home message of this activity is that despite our differences in race, religion and creed, we all are the same at the genetic level," said NSC chairperson Assoc Prof Dr Syahrilnizam Abdullah.

He explained that the week-long semi-finals, aptly themed "Unity in Diversity", aimed to teach the students to appreciate the physical, chemical and biological diversities and similarities that exist between humans.

Prof Syahrilnizam (seated) with the teams from SM Sains Alam Shah, Kuala Lumpur (left) and SMK Sung Siew, Sabah.

The genetic testing was just one part of the MyUnity Research module.

Contestants also had to carry out urine tests on their own samples in the chemistry component of the module.

The boys of SM Sains Alam Shah, Kuala Lumpur found it the most fascinating part of the whole competition.

"These simple tests can help us figure out if there is something wrong with us on the inside.

"It's really fascinating that something so basic can reveal so much," said Luqman Hakim Abd Halim from the school.

Everyone also visited the dairy farm in Universiti Putra Malaysia (UPM) to learn about milking cows and perform a California Mastitis Test (CMT) on the milk to determine the health of the cow.

To further stress the importance of unity, the MyConcepts Challenge required the students to divide into goups of eight and work with their competitors.

The groups had to prepare and present short talks on the application of basic scientific concepts in daily life.

The rules required the students to incorporate items such as ping pong balls, cardboard and paper cups into their presentations.

The MyGastronomy Race was a favourite for the team from Sabah.

The challenge featured an indoor obstacle race with eight stations where the students had to complete experiments and quizzes.

"I can't wait to try these experiments back at school," said Shim Tian Hui from SMK Sung Siew.

In the final MyWinning Round, the teams had to present what they had learnt so far, and also share information about a Nobel Laureate winner, the identity of whom was revealed to them just the day before.

Forty eight students from 16 schools across the nation took part in the semi-finals of the competition, held at UPM.

At the closing ceremony, Academy of Sciences Malaysia (ASM) chief executive officer Dr Ahmad Ibrahim said the future of Malaysia depends on scientific innovation.

"The world will be driven by science and it's important we nurture the right talent to drive this development," he said.

UPM deputy vice-chancellor (research and innovation) Prof Dr Mohd Azmi Mohd Lila said the students should also unite their minds and hearts to further science.

"If you can't do that, whatever instruments, tools and money you have will not be enough," he added.

The teams from SM Sains Alam Shah, Kuala Lumpur, SMK King George V, Negri Sembilan, SMK St Francis, Malacca, and SMK Sung Siew, Sabah will proceed to the finals that are expected to be held in October.