Secondary students swapping sport for science workshops

Creating optical illusions, testing colour against heat and measuring refraction of light are just some of the experiments students at schools north of Brisbane have been busy doing with QUT pre-service teachers.

For term three, some students are choosing to join a STEM (Science, Technology, Engineering, and Mathematics) session each Thursday afternoon, instead of sport.

The STEM sessions were initiated during the Moreton Bay STEM Fest held from July to August whereby students in Years 7 and 8 from Burpengary SHS, Murrumba State Secondary College, North Lakes SHS and Dakabin SHS engaged in scientific investigations.

The students showcased hands-on projects including solar ovens, focusing light and growing plants with electricity.

The experiments proved so popular among the students from Dakabin State High the sessions are set to continue.

QUT pre-service teacher, Alexandria Leighton (pictured above with students), joined the group each Thursday afternoon with Dakabin science teacher Nicole Brown to gain valuable insight into classroom activities and how to engage and encourage students to choose STEM studies.

"It was an invaluable experience to mix with the students and to work with a science teacher to see how investigations can be carried out in an interesting way," Ms Leighton said.

"I was involved in the STEM Fest and was keen to follow up and stay on working with the students."

Ms Leighton is in her second year at QUT's Faculty of Education studying secondary science and home economics.

"I particularly enjoy the connection between science and food and ways to teach scientific concepts in a meaningful and dynamic manner," she said.

Dakabin SHS's Science Head of Department Grant Nicol said the workshops at the school provided an extension to their science classroom lessons where students could explore STEM related investigations that took their interest.

"By choosing their own topics, students have shown more engagement and excitement in class which has a positive learning cross over to other school classes and subjects," Mr Nicol said.

"Sharing the experience with pre-service teachers has been valuable for students to gain insight into their projects and to build on their ideas."

Ms Leighton is also being mentored through the QUT-led Step Up project that is working towards transforming the nature and delivery of mathematics and science pre-service secondary teacher education in Queensland.

Step Up was established with the support of Australian Chief Scientist Ian Chubb to try to make serious changes to the way science and mathematics is taught and encourages students to pursue a future scientific career.

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