



STEM Specialist Teacher Daniel Edwards

In celebration of World Teachers' Day on October 29, the Teachers Registration Board of Tasmania is proud to showcase Tasmanian teachers.

Montello Primary School student Indi Wells has won the Asia Pacific category in a global micro:bit competition as part of the school's integration of STEM learning.

More than 170 students from grades 3 to 6 at the school participated in the challenge - most making it to the Australian level hosted by Pakronics and about 40 students had their projects selected to be submitted to the international level of the do your :bit challenge.

Montello Primary STEM specialist teacher Daniel Edwards has been using micro:bits with his classes and Code Club for the past 18 months.

"I was looking for opportunities to integrate STEM learning with other curriculum areas and I found out about the do your :bit challenge on the micro:bit and Pakronics websites while I was planning units of work to introduce students to the micro:bit," he said.

The challenge involves students developing a solution to a problem relating to the United Nations' Global Goals for Sustainable Development - in this instance, the problem had to tie into the theme of health and wellbeing.

Miss Wells' success has inspired her to continue her use of digital technologies to solve problems.

"I feel very proud of myself for winning the :bit challenge and am very inspired to continue learning about more things I can do with the micro:bit," Miss Wells said.

"I chose to tackle this problem because my cousin has anxiety, so I wanted to create something to help him. I also think that it could be useful for the many other people with stress or anxiety.

"I was looking for opportunities to integrate STEM learning with other curriculum areas and I found out about the do your :bit challenge on the micro:bit and Pakronics websites."

"It has inspired me to think about how I can use STEAM and Digital Technologies to create devices to help others and solve issues in the community," she said.

The learning outcomes from the challenge intersect the curriculum on many fronts.

"There are connections between the requirements of this challenge and almost all of the content descriptors of the digital technology curriculum at these year levels," Mr Edwards said.

"There are links to English, with consideration to audience and purpose as the students create texts and posters to share their ideas and how their project solves a relevant community problem.

"There are also connections to the HPE curriculum, particularly in regards to the content descriptors for Personal, Social and Community Health.

"Finally, the challenge provides for links to the Personal and Social Capability of the General capabilities, such as contributing to civil society, communicating effectively and working collaboratively as they develop a greater sense of empathy and understanding of others in order to develop a relevant solution," he said.

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Montello Primary's participation is due largely to having received a Schools Plus grant initiated by Assistant Principal Cam Hales, which resulted in Google providing \$33,000 in funding to purchase resources for the school's newly opened Makerspace. The school's partnership with Schools Plus involves regular coaching sessions.

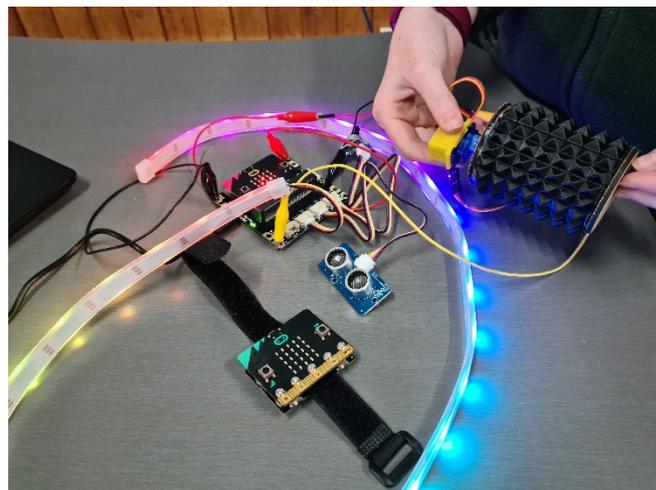
"We [Mr Hales and Mr Edwards] have worked together with our coach at Schools Plus to develop a rubric to transform and integrate STEM learning, as well as improve the general teaching and learning culture, across the entire school.

"This includes running a number of PL sessions with staff members, hosting afternoon sessions with parents, and organising STEM sessions for students from the local North West Support School.

"We have some plans in place to go further beyond the school and help lead change within our school cluster, running PL and workshops for staff from cluster schools and having them observe lessons and facilitating workshops and presentations at STEM expos next year," he said.

Miss Wells' success has had a significant influence on all other students at Montello.

"It has inspired many others to apply themselves to learn more about STEM and Digital Technologies, seeing that they too are capable of also achieving great success and, much more importantly, developing real solutions to relevant problems in the community," Mr Edwards said.



"Students are starting to see that the things they learn in STEM and Digital Technologies classes open up endless possibilities for their futures and enable them to develop the skills and understanding necessary to make their ideas become a reality – whether that be a robot, video game, animation, app, device or whatever else they can think of.

"I am extremely proud to be playing a part in our increasing level of engagement with STEM learning and to have seen this result in a student winning an international competition.

"I am highly encouraged to already see such great success from Montello students in many STEM competitions and challenges," he said.



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