Hands-on learning successful strategy for first technology teacher to win the Prime Minister's Science Teacher Prize

Sarah Washbrooke from Remarkables Primary School in Queenstown has been selected as the 2020 Prime Minister's Science Teacher Prize winner.

Her hands-on approach to teaching technology so engages her students that they often remain unaware of the depth and range of learning they are doing.

"They usually start by creating something or designing something or making something, and then we bring in other aspects. A lot of my students don't actually realise that they are doing a lot of maths and English and scientific principles in technology until I actually point it out afterwards that they have done an hour of writing, for example, in computational thinking."

Sarah says her 'low floor, high ceiling' approach really works because once her students experience success they really want to achieve more.

Sarah also ensures her students remain engaged by making sure to offer them real life authentic projects and she also involves the wider Wakatipu community in setting challenges.

In return, seeing her students engaged in their learning is a major motivator for Sarah. "My passion stems from seeing the engagement of my students. They really love technology, they love the creativity and the problem solving, they love making things for people."

Encouraging her students to overcome challenges is really important and motivating to Sarah as well.

"It's great seeing the passion they can get from the responses from people once they have created a product for somebody. Seeing their aha, their eureka moments, when they have actually finished a challenge and were successful even though they may have had failures they have managed to strive and complete the product."

Sarah has taught at Remarkables Primary School since 2016 as their technology specialist teacher, supporting the development of students within the world of science and technology. Her key focus is the Year 6–8 age group.

She provides regular feedback to her students and encourages them to seek feedback from stakeholders, such as local architects and iwi from inside the community, who then become involved in the students' technology studies.

"I incorporate te ao Māori and whanaungatanga within my teaching at Remarkables. We bring in the stories of tangata whenua through the different projects. We have had enviroschool projects, for example, where we've started by telling the stories of Papatuanuku.

"Technology, not only is it about knowledge and skills, it's also about real world learning, authentic learning for students."

She enjoys seeing the creativity in her students and the empathy and resilience they develop through following the design-thinking process.

"Because life isn't straight forward, there are always going to be problems and set backs, so if they can learn to learn for themselves and they can learn to solve problems and go back again and be prepared to try again, then those skills are going to set them up for life in the future too."

Sarah is a highly valued member of her school and also the wider Wakatipu community, bringing her expertise about the Technology Curriculum to the forefront. She has taught technology for the past 23 years, the last 17 in Aoteoroa.

She has created technology assessment rubrics and STEM/technology programmes for her students in all areas of the Technology Curriculum from robotics and sewing to gardening and digital technology. These are shared frequently with teachers across New Zealand through discussion forums, webinars and Facebook groups.

Sarah keeps up to date with the New Zealand Curriculum development and regularly attends professional learning in technology education. She also attends regular cluster meetings to discuss new achievement strands. Sarah volunteers in two subject associations: Technology New Zealand and Digital Technology Teacher, which have directly fed into her teaching practice, enabling her students to access current, valid and appropriate learning opportunities. Sarah has also spoken at conferences, run workshops and helped mentor groups of teachers upskilling in technology education.

In 2019, Sarah received the Technology New Zealand (TENZ) 'Outstanding Technology Teacher Award' for continued excellence in Technology teaching. She was also nominated by colleagues, parents and students for the 'Genesis School-gen Super Teacher' award, where she placed as a runner up.

The Prime Minister's Science Teacher Prize selection panel was most impressed with the way that Sarah's work is increasing student participation and engagement in technology at her school and also within the community, and also by how she develops and shares resources to the wider New Zealand technology teaching community. Sarah wins a $150,000 prize, with the majority going back to the school to support student learning.

Sarah says: "Having taught technology for over 20 years, I can still say I love my job."

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