

Mentoring our young scientists

Dr Heather Meikle is a secondary school science teacher at Palmerston North Girls' High School. Heather was recently awarded a Royal Society Science and Technology Medal for her work. She enjoys encouraging and mentoring students to create opportunities in science and to help them face any challenges they may encounter along the way.



Having completed a BScAg (Hons) degree at the University of British Columbia, Vancouver, Canada I followed my passions for sheep and wool to New Zealand. At Massey University working with Dr George Wickham and the late Professor A. L. Rae on my PhD, I investigated the inheritance of fleece and follicle characteristics of Merino versus Romney sheep. I also started my teaching career with Dip Ag and degree students teaching genetics, wool science, sheep production and meat science. A stint at Lincoln University followed where my research was focussed on strength testing wool and teaching wool technology to a variety of students. After a year as a general manager of a woollen manufacturing company I entered secondary teaching at Palmerston North Girls' High School (PNGHS). As a science/biology teacher and coordinator of the Gifted and Talented programme, I get to work with outstanding young women as they begin their science studies.

Creative thinking is one of the key features of the PNGHS Extension programme and also of CREST. CREST = Creativity in Science and Technology. This is an international programme administered by the Royal Society of New Zealand www.crest.org.nz. Students learn time management, higher order thinking and creative problem solving skills. Based on the technology model, CREST encourages students to keep a record of their

research and to use scientific methodology accurately. Mentoring is critical to CREST.

Mentorships change lives – both the mentee and the mentor gain from the experience. Young scientists learn that research can be challenging, that setbacks occur but that persistence and hard work pay off. Sophie Zhang a recent PNGHS Gold CREST recipient is now studying at Columbia University. Personally, mentorships have been critical to my scientific teaching career and I am fortunate to have and to have had excellent mentors.

Seeking new science opportunities for students, I became involved in a range of regional, national and international endeavours including the Manawatu Science and Technology Fair, NZ International

Biology Olympiad (NZIBO) and ScienceOlympiaNZ (SONZ). This year has been extraordinary! I was a team leader for the NZIBO team to Japan, on a scholarship from PNGHS I attended the World Conference on Gifted and Talented Education in Vancouver and participated in a robotics day after winning a VEX robot from Massey University's School of Engineering.

During the recent pre competition part of the International Biology Olympiad trip to Japan, the team visited Universal Studios. I realised that Jurassic Park involved not just interesting reptiles but a dreaded roller coaster. A team member said, "Sometimes you just have to face the challenge and do it anyway". Science is exciting and through my involvement with young scientists I continue to learn and have the most amazing adventures.