

Students receive Victor Chang School Science Awards

Year 11 students, Seeya Naik Panvelkar and Esther Yum, have each been awarded a Victor Chang School Science Award by the Mayor of Strathfield, Cr Karen Pensabene.

Established in 2004 in honour of pioneering cardiac surgeon, Dr Victor Chang, the Victor Chang School Science Awards celebrate gifted students in (STEM) subjects. Esther and Seeya were nominated for their innovative thinking skills and passion for STEM.

More than 100 schools from across the state participated in the competition, which aims to foster and encourage an interest in science among secondary school students, with the goal of promoting careers in STEM as a viable and interesting career path. Seeya and Esther were presented with their awards during a morning tea at Strathfield Council Chambers.

Citations for the girls are below.

Esther Yum

Esther has interests across STEM areas. She has highly developed skills in the use of 3D printing software and has utilised these skills to problem-solve and design and print devices that benefit others.

In 2021, Esther designed and 3D printed a cost-efficient pill dispenser, *The Medispenser*, which does not require the user to physically grasp individual pills when taking or refilling medication, ensuring only a single dose is dispensed each time. This idea came from Esther's research into the difficulties elderly individuals or sufferers of conditions such as Parkinson's disease have grasping small pills. For this invention, Esther achieved a Bronze CREST Award from the CSIRO, Third Place in the STANSW Innovation and Engineering Design Award (Years 9-10 Category) and a Gold Parnassus Award for Innovation which recognised the quality of the research Esther conducted.

In 2022, Esther again used 3D printing to create the *Pluviocatcher*, a device for harvesting rainwater that can also be converted into a hand-washing system when tilted. With this design, Esther secured First Place in the Innovations and Engineering Design Years 9 to 10 category in the STANSW awards and a Silver CREST Award from the CSIRO. Esther has also achieved Distinctions and High Distinctions in the Big Science Competition and Australian Geography Competition.

Esther is articulate and innovative in her approach to solving scientific problems. She is passionate about scientific research and technology, and she has been part of Meriden's Interact Club and Tech Angels Club. Her position as Oxford House Captain highlights her outstanding leadership abilities. She is a role model for others with her enthusiastic and helpful nature.

Seeya Naik Panvelkar

Seeya's approach to STEM courses is exemplary. Her work demonstrates careful exploration, logically reasoned argument and excellent experimental skills. In Years 7 and 8, Seeya was involved in Meriden's Maker Club and achieved a High Distinction in the GROK Web Coding Competition. In Years 9 and 10,



Top image: Esther Yum and Seeya Naik Panvelkar.
Bottom image: Cr Karen Pensabene, Seeya Naik Panvelkar, Esther Yum and Ms Priscilla Curran

Seeya attained Distinctions and High Distinctions in the Science Big Science Competition and Science ICAS Competition.

In 2021, Seeya built a turtle-friendly light detector. This project was an invention made to be placed along the coastlines or in residential houses near turtle-breeding beaches. It included a photoresistor that measures light levels around the areas and flashes a dim red LED light facing away from the beachside. The invention was made to raise awareness of artificial light pollution, which can deter young hatchlings from reaching the ocean. Seeya achieved a Silver CSIRO CREST Award for her invention.

Seeya applied excellent experimental skills to a project with real-life relevance in her Year 10 Student Research Project in 2022. She built and tested an oil spill mitigation system that utilised a water sensor to monitor oil tank levels. Additionally, she devised an appropriate response protocol for when oil levels fall below a specified threshold, serving as an alert for potential oil spills. The system included the guidance of oil into a designated pipeline to prevent any water from escaping into the ocean. Furthermore, a functional valve system was implemented to release an efficient dispersant, minimising harm to the marine environment and enhancing testing accuracy. With this design, Seeya secured First Place in the Invention Category at the Senior School Science Showcase and a Gold CREST Award from CSIRO.

Seeya is an enthusiastic and dedicated student of Engineering, Biology, Physics and Mathematics. She brings humour and curiosity to her learning. Seeya works hard to develop a strong theoretical understanding and numerical skills and has an excellent understanding of the scientific method. Her passion for service is evident in the enthusiastic way she has inspired students through her role as Science Captain.

Mrs Alexandra Phillips

Science Teacher and Coordinator of Learning Link - Innovation