Excellence in Teaching Natural Sciences (GET)

Nominee: **Ms Danielle van Eck**
School: **Protea Heights Academy**
Cluster: **Metro North and Metro East**
District: **Metro East Education District**

As passionate teacher, Ms Van Eck's philosophy on the culture of learning is based on developing analytical and critical thinking and encouraging learners to think independently by learning, unlearning and relearning. She is instrumental as driving force behind the science ethos at Protea Heights Academy (PHA). With her eyes set firmly on the Fourth Industrial Revolution and her passion for robotics, she heads up the robotics programme at PHA. Her learners won the recent national robotics competition and will compete internationally in Hungary in the near future. She has fast-tracked learners into thinking about the importance of artificial intelligence and how they can adapt to the rapidly changing technology-driven global environment. She inspired all grades to enter and compete in the National Science Olympiad and National Science Expo.

Ms Van Eck believes that it is very important to develop her lesson plans and intervention programs to be in line with the assessments outlined in the National Protocol for Assessment. During her science lessons, mutual respect is the cornerstone of her productive classroom environment and meaningful relationships are fostered with learners. She makes use of the flipped classrooms concept in her lessons, which includes the incorporation of practical demonstrations and collaboration via a Google document or slide in order to encourage learners to share their knowledge and ideas with each other.

To further enhance the learning experience of learners, she uses various technological aids, such as Google platforms, PheT simulations, Ed Puzzle and QR codes. Because of her practical nature, Ms Van Eck performs demonstrations in class to help learners to conceptualise difficult sections of the content they are trying to master. She encourages her learners to be partners in the learning process and through her learner support program which includes additional lessons and co-curricular activities, she has established a laboratory assistants' team where learners are trained to manage stock and prepare and perform practical demonstrations. In partnership with the University of Stellenbosch, learners are also exposed to current developments such as hydroponics and aquaponics. She also established partnerships with the Universities of the Western Cape and Missouri.

Ms Van Eck fosters strong working relationships between her colleagues and the community. She creates a sense of social responsibility by sharing resources via team drives with the Southern Suburb Science Circle and tutoring in the social responsibility programme run by Ernst and Young. This programme focuses on addressing social injustice through the development and mentoring of young girls from previously disadvantaged communities in the area of Science, Mathematics and Accounting.

Not only did Ms Van Eck help to organise and host the PHA Science Week initiative and Women in Science which focused on bringing schools from all over the Metro East District and the greater Western Cape together, she also plans to take the annual Science Expo at PHA to learners in less privileged areas.

It is therefore without reservation that Ms Van Eck is nominated as a worthy recipient of this award.