



## Doug Clarke Medal

In 2008, the RSWA Council resolved to honour the life of Doug Clarke by initiating 'The Doug Clarke Education Advocacy Award Medal' of the Society. This award recognises the outstanding contribution to science education made by Doug Clarke from Murdoch University. Clarke performed hundreds of chemistry shows at schools and regularly appeared on television. He inspired thousands of school children in the wonders of science, and assisted undergraduates and postgraduates. The inaugural award was presented to Doug Clarke at the Annual General Meeting of the Society in 2008.

On 19 July 2018 The RSWA was pleased to announce that the Doug Clarke Medal for 2018 for Outstanding Contribution to Science Teaching at High School level is awarded to

### Mr Darren Hamley



Darren Hamley has been a science teacher at Willetton Senior High School since 1992. Commencing in 2000, Darren has been the coordinator of Willetton Senior High School's Gifted and Talented Program, which has grown from an original group of about 15 students to a program supporting 360 students across all year groups. To cater for the needs of gifted and talented students, Darren uses a differentiated curriculum focusing on authentic science experiences. He devotes over 25% of his class time to teaching students to be scientists rather than just teaching them science. Current projects designed and executed by current Year 7-10 students include:

- Construction and deployment of artificial nesting boxes with motion detection surveillance system to study the breeding of Black cockatoos and Major Mitchell's Cockatoos
- A study of the echolocation patterns of dolphins to determine if they are copied by their offspring
- A study of change in Monkey Mia dolphin echolocation bursts before and after being fed
- Hydrodynamic drag testing of dolphins with dorsal fin damage using 3D printed replicas and mathematical modelling to determine the effect on dolphins of discarded fishing line
- Construction, testing and deployment of Electro-deposition artificial coral reefs to speed the regrowth of damaged reefs
- Studying the brightest galaxy sources detected with the Murchison Wide-field Array
- Construction and deployment of baited remote underwater video devices to conduct fish surveys

In 2016 when the school was undergoing a major rebuild, Darren initiated then submitted a successful application to build a school observatory. The observatory, which has just been completed, houses a fully robotic 36 cm telescope which the students can access from home. The project has been a very long and complex task. The telescope will be used for astronomical research, astrophotography and for observation nights. Students from Darren's astronomy club have met once a week for the past four years to plan and build the observatory.

One of Darren's major achievements has been the solar car project. Darren initiated the solar car club in response to research indicating that our future engineering students lacked skills in hands on engineering. The group has met after school with a group of volunteer parents since 2007. They have competed in the Darwin to Adelaide World Solar Challenge on two occasions, and twice driven the car as a demonstration of sustainable transport across the Nullarbor. The car has recently been totally refurbished ready for a drive across Western Australia later this year.



Darren Hamley is prolific in his promotion of science and Science Education in Western Australia



Darren with Willetton students who won a video competition on a fish dumping harm campaign <https://www.communitynews.com.au/canning-times/news/school-video-campaign-catches-on/>