

2025 STANSW Young Scientist Awards

Samantha He Pymble Ladies' College

Project Title: Experimental Analysis Of Gadoliniums Magnetocaloric Effect: Magnetic Field Strength Dependence And Limitations From Environmental Thermal Noise

Year 11 to 12 Scientific Investigations - Physics

Dear Samantha,

Congratulations on being part of this year's Young Scientist Awards and for the thought, care, and originality you brought to your project. You've demonstrated genuine initiative in designing and carrying out your own ideas – an achievement that reflects both curiosity and persistence.

Our judges reviewed your project in detail, considering how clearly you explored your question, how well you supported your conclusions, and how effectively you communicated your process. Their feedback below highlights the aspects that were particularly strong and offers suggestions to help you extend your thinking even further – much like the peer review process used in professional research.

The strengths of your project include:

- analysing data, suggesting plausible explanations for the results
- selecting an area of study that has relevance to problems/issues in the wider world

Next time, you could make your project even better by:

- exhibiting creativity and/or originality in the choice of topic

Thank you for sharing your work with us, it is a testament to your growing capability as an investigator, communicator, and creative thinker. We hope this experience strengthens your confidence and inspires you to keep pursuing questions that matter to you..

A handwritten signature in black ink, reading 'Philippa Miller'.

Philippa Miller

Young Scientist Coordinator