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Woo's Wonderful World of Maths, Eddie Woo, 2018

Providing the inspiration for the launch of the WA Maths Book Club, Eddie Woo's book is an anthem of mathematical ideas for an audience of readers who have a love of mathematics or simply for those who love the charismatic Eddie Woo.

Each of the twenty six chapters looks at a different mathematical idea or topic and the short chapters could easily be used to spark student interest in the classroom. Book club members agreed there were many familiar ideas in the book, but they were communicated in a modern and relatable way. Knot theory, number theory, graph theory, conspiracy theory, cryptography and more; the book continued to provide a vast range of complex ideas explained with easily accessible mathematics. 'Mathematics is the ultimate skeleton key: if you learn to wield it, it can unlock almost anything.' p 346

Beyond familiar topics such as the Golden Ratio there were also some new ideas presented in the book for the book club members. One discussed was the great chapter, Twinkle Twinkle Little Star. Opening with 'Quick, picture a star in your mind! What does it look like?', Eddie unpacks astronomic geometry in a historical context. Going on to reveal how except for the sun, stars are so small that the shape we perceive them has to do with the way light is bent and diffracted. The star shape we are now familiar with is seen by us through our organically grown human eye that contains suture lines that are in fact star shaped.

If any faults were viewed by the book club it would be that the proof of the Party Problem in Six's a Crowd was a little long winded. However, this led to a great discussion about the beauty of proof and what constitutes a good mathematical proof. Each chapter provided a taster of a mathematical idea so many a time you were left on the edge of your seat wanting more. Linking the further readings to the chapters would have provided an avenue for those wanting to probe further into the mathematics.

In 2018 Eddie was named Australia's Local Hero of the Year and shortlisted as one of the top ten teachers in the world. Reading his book, his passion and love of mathematics is obvious and demonstrates why he is completely deserving of these accolades. This book may not provide a depth of background for the hardened mathematician but Eddie's amazing ability to communicate a wide range of mathematics simply and link it to the world around us is enough reason why this book should be an essential part of a mathematics teacher's personal library.