

January 2019

A Mathematician's Lament, Paul Lockhart, 2009

Originally a 25 page essay written in 2002, A Mathematicians Lament was handed to Keith Devlin from the Mathematical Association of America to read. He was so inspired, he wrote about it in his next column and stated *'it as one of the best critiques of current K – 12 mathematics education he had ever seen'*. Keen to share the lament with the wider mathematics education community he went on to track down the author and the expanded book version of 140 pages read by WA Maths Book Club was published in 2009. The shorter 25 page essay is available in PDF form from

https://www.maa.org/external_archive/devlin/LockhartsLament.pdf

This book does not contain anything that has not be said by countless mathematics educators before, however it is a creative piece of great writing that comes straight from the heart. Paul reflects on an American mathematics education system that he claims is *'destroying a a child's natural curiosity and a love of pattern-making'* p20. Paul is frustrated at a system that argues over what order *'the topics'* should be taught and the use of this notation or the other. A mandated curriculum with standardised testing does little to support the true nature of mathematics as *the music of reason*. To do mathematics is to engage in an act of discovery and conjecture, intuition and inspiration.

In his chapter, High School Geometry; Instrument to the Devil he clearly demonstrates the way that in an arena where students can finally get to engage in true mathematical reasoning, they are poisoned by the ridiculous repertoire of terminology used. For the students who have the ability to create beautiful poetry of geometric proof of the obvious they are then required to translate it to the *"absurd hieroglyphic framework in order for their teacher to call it 'correct'."* p73

If you are looking for a book that will provide a wealth of inspirational quotes than this book is for you. In a time where, because of STEM, some educators are led to believe that all mathematics is to be applied to some science or engineering problem, this book offers a refreshing contrast to this viewpoint.

Mathematicians conceive concepts long before anyone has any idea what they are using them for. For examples black holes were perceived by mathematicians long before astronomers found any. Mathematics is the purest of art forms and students should be let in on the secret that it is created by human beings for their own amusement.

By reading this book you will be inspired to really appreciate mathematics the artform as seen through a pure mathematician's eyes. It was felt the book was rather critical of teachers and the system in general and book club members discussed that this was not necessarily the case in Australia as there is a requirement for students to be *'doing mathematics'* through the Proficiency Strands of the Australian Curriculum. However there is still some way to go and if Paul was to write a sequel to his Mathematician's Lament that gave some solutions to *'the problem'* than this would be a must read by WA Maths Book Club.