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The Criticality of Mathematics Training In Creating Innovative Futures

This talk tackles some of the many myths about mathematics that affect student perceptions and equips teachers to respond with debunking examples. The foundational aspect of the school mathematics curriculum can make it difficult for students to see the relevance to the real world and their future. The role of mathematics in tackling many of society's greatest challenges will be discussed, and the reason that mathematics consistently ranks as the top job in an annual world survey of occupations will be explained.

Finally, some classroom suggestions will be offered that can help students appreciate that - far from being a dusty old and irrelevant subject - new mathematics is being developed all the time in response to society's needs and STEM. A personal reflection concludes the talk, including an overview of the career opportunities and the societal impact that becomes possible with mathematics training.

Kate Miles-Smith is a Professor of Applied Mathematics at the University of Melbourne. Passionate about interdisciplinary applications of mathematics, her award-winning research has found application in many fields as diverse as manufacturing design, epidemiology, computer vision, finance, and stem cell modelling. She is the former President of the Australian Mathematical Society.