

Aboriginal and Torres Strait Islander ways of working and learning in mathematics

Aboriginal and Torres Strait Islander perspectives

This resource has been designed to support teachers' understanding and appreciation of Aboriginal and Torres Strait Islander knowledges and frameworks within a mathematical context. These processes and approaches can be used to embed Aboriginal and Torres Strait Islander perspectives in the teaching and learning of mathematics and may benefit the learning styles of many students in the classroom.

Mathematical resources for the classroom

Aboriginal and Torres Strait Islander ways of knowing and working in a mathematical context

The links and resources below are provided as suggestions and ideas for classroom practice, and should be adapted to fit your local context.

Author and resource	More information
Australian Curriculum professional topics , Queensland Curriculum and Assessment Authority (QCAA)	QCAA has an extensive resource database in the 'Australian Curriculum professional topics' section of its website. These topics provide some guidance around how to embed Aboriginal and Torres Strait Islander perspectives and resources, and can be used in mathematics as well as many other subject areas.
Maths situations in everyday Indigenous family and community life , Aboriginal and Torres Strait Islander Mathematics Association:	Interactive numeracies define and connect both numeracy and mathematics. This handbook shows ways to transfer mathematics to problem-solving situations in everyday life where mathematics becomes numeracy.
Professor Tom Cooper — YuMi deadly maths , Queensland University of Technology, YuMi Deadly Centre Education Faculty:	YuMi Deadly Mathematics is a mathematics pedagogic framework. It was originally designed for Aboriginal students, Torres Strait Islander students and low socioeconomic status students, but has been used to support mathematical learning for a broader range of students. It is based on an understanding of sequencing, connections and big ideas and involves using a cycle of teaching strategies to plan and teach mathematics lessons and units.
Connect with maths — quality teaching and learning for Indigenous learners , the Aboriginal and Torres Strait Islander Mathematics Alliance:	Dr Chris Matthews, an Aboriginal man from the Quandamooka Nation (Moreton Bay, Queensland), has developed an approach that explores a way of teaching algebra that focuses on storytelling and explores how symbols and their meanings can communicate mathematical contexts.

Further reading in this area

Boaler, J 2016, *Mathematical Mindsets: Unleashing students' potential through creative math, inspiring messages and innovative teaching*, John Wiley and Sons Ltd, Chichester, UK.

Hattie, J, Fisher, D & Frey, N 2016, *Visible Learning for Mathematics, Grades K–12: What works best to optimize student learning*, Corwin Mathematics, Thousand Oaks CA.

Harrison, N and Sellwood, J 2016, *Learning and Teaching in Aboriginal and Torres Strait Islander education*, third edition, Oxford University Press, Melbourne Vic.

Matthews, C, Baturu, A, Cooper, T 2005, *Creating Your Own Symbols: Beginning algebraic thinking with Indigenous students*, eprints.qut.edu.au/14627.

Papic, M, Mulligan, J, Highfield, K, McKay-Tempest, J and Garrett, D 2015, 'The Impact of a Patterns and Early Algebra Program on Children in Transition to School in Australian Indigenous Communities,' in Perry, B, MacDonald, A & Gervasoni, A (eds), *Mathematics and Transition to School* (pp. 217–36), Springer Science+Business Media, Singapore.

Sullivan, P 2011, *Teaching Mathematics: Using research-informed strategies*, Australian Council for Educational Research, research.acer.edu.au/cgi/viewcontent.cgi?article=1022&context=aer.