

Mathematics *by* Inquiry

Mathematics by Inquiry is a bold new national program to promote innovative approaches to mathematics teaching in Australian schools. It is managed by the Australian Academy of Science in partnership with the Australian Association of Mathematics Teachers, and is funded by the Australian Government.

The project will develop classroom materials with an inquiry-based approach to mathematics, for every year of school from foundation to year 10. The materials will emphasise distinctive aspects of mathematics, including generalisation and proof as key elements of mathematical reasoning. They will emphasise mathematics as both a dynamic human endeavour and as an enabling science which underpins scientific and technological advancement. Many of the materials will be based on relevant real-world examples and contexts, and all will enable students to deal with complex situations using a variety of mathematical methods.

The classroom materials will be seamlessly integrated with a set of professional resources that support individual teacher learning, classroom practice and a whole-of-school culture of inquiry approaches to mathematics. These resources will support the Australian mathematics curriculum and be applicable across a range of different school settings. They will build teachers' knowledge and capacity with contemporary practices in mathematics teaching and learning, with a particular focus on problem solving and mathematical reasoning.

Mathematics by Inquiry will engage with and draw from the work of leading teachers, principals and academics from around the country. The project team will work closely with educational jurisdictions, teachers' associations, teacher educators and principals to ensure that the materials and inquiry approach become a central aspect of every Australian mathematics classroom.

Key facts

Partners: The Australian Academy of Science and the Australian Association of Mathematics Teachers

Funding and duration: \$6.4 million from 1 November 2015 to 30 June 2018

Key personnel:

- **Executive Director:** Dr Steve Thornton
- **Director of classroom materials:**
Emeritus Professor Kaye Stacey
- **Director of professional resources:**
Professor Peter Sullivan
- **Director of communications and dissemination:**
Mr Will Morony
- Other project staff to be employed

What Mathematics by Inquiry will provide for teachers, schools and students:

- a **framework** for Mathematics by Inquiry, informing all aspects of resource development and dissemination
- exemplary Mathematics by Inquiry **experiences** at every level from foundation to year 10
- **special topics**, each being a substantial teaching resource highlighting aspects of mathematical reasoning such as modelling or proof, capitalising on emerging technologies and mathematically able software
- **professional resources**, each highlighting an aspect of Mathematics by Inquiry such as assessing higher order thinking, supporting student inquiry and mathematical inquiry in STEM contexts
- **dissemination** via Scootle and the AAMT Dimensions portal, supported by 240 champions recruited and trained from across Australia.

Contact details

Mathematics by Inquiry

Australian Academy of Science
Ian Potter House
Gordon Street
Canberra ACT 2601

mbi@science.org.au
(+61) 2 6201 9400

