re(Solve) MATHS BY INQUIRY Reconciliation Data

Summary of learning goals

- This sequence interprets data of significance for Australian society, and provides an opportunity to develop and use mathematical skills in a humanities and civics context. The mathematical goals are to extend the students' growing repertoire of data graphs to include side-by-side column graphs and 100% bar graphs.

- Students use knowledge of percentage, interpreted informally and also calculated.

Australian Curriculum: Mathematics (Year 6)

ACMSP147: Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables.

ACMSP148: Interpret secondary data presented in digital media and elsewhere.

ACMNA131: Make connections between equivalent fractions, decimals and percentages.

Summary of lessons

Who is this sequence for?

- Students who have a good working knowledge of basic column graphs and are ready to learn to represent more complex datasets. They need to be able to represent fractions as percentages.

- Students will also need sufficient understanding of Australian history and society to fully engage with the issues relating to Reconciliation, including some understanding of how life looks from Aboriginal and Torres Strait Islander peoples' perspectives.

Lesson 1: Face the Facts

Students are presented with data from the 2016 Australian Reconciliation Barometer. They make interpretive statements about the data, then use the original survey questions to collect data from a local population. They compare their data to the original findings, using a side-by-side column graph.

Australian Academy of Science

Reflection on this sequence

Rationale

Mathematics extends beyond the physical and temporal restrictions of the maths classroom. The intention of this lesson is to use mathematics as a stepping-off point for a sensitive and personal reflection on attitudes towards Indigenous people and culture within Australia.

The Reconciliation Barometer presents data collected from a biennial attitudinal survey conducted by Reconciliation Australia. The statistics provide a confronting and provocative profile of general community sentiment.

The intention of this lesson is to provoke young Australians to think broadly and carefully about what values they wish to see encouraged in the society in which they live.

reSolve mathematics is purposeful

- Students work with data and represent responses to questions using percentages as a way to compare populations, developing fluency with number and calculations in the process.
- The Reconciliation Barometer highlights significant social issues. Mathematics provides tools and language to engage with issues and represent the facts. Students are encouraged to use their mathematical skills to examine the attitudes and values of Australian people.

reSolve tasks are inclusive and challenging

- All students can participate in the conversation around reconciliation. They are challenged to consider the issues of racism and prejudice from a personal perspective and reflect on their own thoughts.

reSolve classrooms have a knowledge-building culture

- Students are encouraged to take action from this lesson; to start talking in their own school and community about the issues of racism and reconciliation.

Acknowledgements

The staff at Reconciliation Australia were extremely helpful and supportive in the processes of developing the ideas behind this lesson. It is hoped that all Australian students will engage in the conversation around reconciliation and the future of our nation.