

**Rebecca Seah & Marj
Horne**

RMIT - Royal Melbourne
Institute of Technology
rebecca.seah@rmit.edu.au

Keywords:

Visualisation,
Perspective,
Representation

Learning areas:

Mathematics

Visualisation – A Critical Component of STEM

The workshop will be divided into three sections. The introduction will illustrate the problem with examples of secondary school students (years 7-10) use of visualisation, representations and spatial reasoning from recent research (An Australian Mathematics and Sciences Partnership Project, Reframing Mathematical Futures II) (Seah & Horne, 2019).

The workshop will then move to some activities which have been targeted to improve students' ability to visualise and reason spatially. The third and final component of the workshop will focus on the key aspect of representations of objects then allows for discussion and questions about the key issues that have been raised.

The audience in this workshop are expected to participate in solving visualisation problems and completing visualisation and representation tasks which have been used in classrooms. A critical component of each task is the discussion of the thinking that participants used in tackling the problems. Also important is discussion about the representations used and how they assisted or hindered in the problem solving process.

Preparation material

Please bring the following materials to the workshop: A4 paper, pencil, ruler, scissors and about 20 small cubes.

Please download and print this file:

<https://static1.squarespace.com/static/5e66dc90e39c7d4b7cf9cb10/t/616760dc5c6b6f1c8aae9d28/1634164956119/Rebecca+Seah+building+views+2+copy.pdf>