

Abstracts of Workshops for Teachers

Primary

P1 - Developing mathematical reasoning – The role of calculators

by A/P Ng Swee Fong

The introduction of calculators in 2007 as a teaching and learning tool in primary five and six mathematics classes means that we no longer need to be bogged down with paper and pencil calculations. Rather the use of calculators provides teachers and students another avenue to explore mathematical reasoning. In this workshop, I will share with teachers ways they can use calculators to develop mathematical reasoning.

P2 - Using short open-ended questions to develop and assess mathematical reasoning

by A/P Foong Pui Yee

Participants will explore short open-ended tasks for developing reasoning in primary mathematics. They will take traditional closed problems that expect one right answer and one method of solution and turn these into rich learning tasks that encourage pupils to take an open approach, reasoning and thinking deeply about mathematics. They will also be introduced to appropriate rubrics for grading pupils' work. Samples of pupil work will be shared and experiences of teachers who have used open problems will also be discussed.

P3 - Enhancing mathematical reasoning through journal writing in the primary math classroom

by A/P Douglas Edge & Mr Eric Chan

In this workshop, participants will i) address the shift towards children's writing in mathematics and the benefits thereof ii) examine, critique and create journal prompts with respect to different domains and iii) assess pupils' sample responses and how to help pupils extend their reasoning and thinking.

P4 - Games in primary mathematics classrooms

by A/P Koay Phong Lee

This workshop will explore the use of games and puzzles to help primary school pupils improve their mathematical reasoning and problem solving skills.

P5 - Generating mathematics investigative tasks from a given stem

by Miss Chua Kwee Gek

Mathematics investigation (MI) task by its very divergent nature requires much reasoning. Reasoning entails the hierarchy of thinking ranging from basic through critical to creative thinking. Teachers will be given an opportunity to generate creative MI tasks. In the process of searching for solutions to these tasks, reasoning is fostered.