Primary Section – Workshops

P 1 - Mathematical Literacy Through the Use of Manipulative for Lower Primary
(30 participants only)
Dr Cheng Lu Pien (MME/NIE)

Abstract: The purpose of the workshop is to help lower primary teachers use manipulative more effectively in their mathematics classrooms by thinking critically how those manipulative meet student learning outcomes. The concrete-pictorial-abstract approach will be used in some instances to enhance teachers’ use of manipulative in teaching mathematics. Teachers who participated in this workshop are expected to work in groups and be actively engaged in the use of manipulative.

P 2 - Learning for Understanding: Some Metacognitive Strategies
Mr Chan Chun Ming Eric (MME/NIE)

Abstract: Teachers spend a lot of time and effort imparting knowledge to students in the hope that they will do well academically. When do students take ownership of their learning? Students who are responsible for their own learning are the ones who are deemed to be able to take their learning to the next level of understanding. This workshop is to equip teachers with some metacognitive strategies to help students become more self-directed learners of mathematics. Sample word problems will be used as the platform for teachers to design probing questions to elicit students' understanding.

P 3 - How to Help Upper Primary Pupils Develop Mathematical Literacy?
Ms Chua Kwee Gek (HOD/Mathematics Deyi Secondary School)

Abstract: The Singapore mathematics framework has five interrelated components on which Mathematics teachers structure their lessons. In daily mathematics lessons, it is important to give pupils the opportunities to develop mathematical literacy. In line with the TLLM initiative, teachers are to enhance the pupils’ capacities to analyse, reason and communicate mathematical ideas effectively in a variety of situations and to understand others presentations. One of the feasible ways is to emphasise the **process** component. At this workshop, teachers are shown the various ways to develop and enhance mathematical literacy via mathematical communication. Teachers will have hands-on practice to express mathematical content in diverse situations both orally and in written form.

P 4 - Talking and Writing Mathematics in the Classroom
Ms Ho Geok Lan (MME/NIE)

Abstract: How do we know that our pupils have learnt the mathematics we taught them? Learning mathematics is more than listening to the teacher and completing homework in class. To be learning effectively, pupils should also be able to demonstrate their understanding through communication, either orally or written. The use of structured group work creates opportunities for pupils to be engaged in tasks as well as acquire
useful social skills. They help one another learn mathematics through questioning, explaining and clarification of concepts and skills. They also learn to practice active listening, turn taking and respecting others. The use of writing activities in the mathematics classrooms serves a variety of purposes. Teachers can use writing prompts for pupils to reflect upon mathematical concepts and skills learnt, gather feedback about teaching and monitor group activities. Such activities promote reflection about mathematics and learning mathematics in the classroom. This workshop gives primary school teachers some ideas of how structured group work and writing tasks can be used in the mathematics classroom.

A/P Foong Pui Yee (MME/ NIE)

Abstract: The workshop will involve teachers in a strategy to learn how to communicate their mathematical thinking as a model for their students. It aims to enhance teachers’ ability in developing strategic questioning techniques that facilitate students’ thinking as they solve mathematical problems. This strategy also aims to increase teachers’ ability to value multiple approaches and to listen to students’ explanations of their thinking without interruption or correction.

P 6 – Writing Assessment Items for Mathematical Literacy at the Primary Level
Dr Jaguthsing Dindyal (MME/NIE)

Abstract: This workshop is meant for primary school teachers who wish to revisit some of the ideas about the writing of assessment items in mathematics. The first part of the workshop will focus on some of the technical aspects of writing such assessment items. The emphasis will be on details for eliciting students’ reasoning with a view to enhance their overall mathematical literacy. The second part of the workshop will focus on the actual writing of such items in selected topics followed by a discussion.

P 7 – Using Technology to Enhance Mathematics Literacy in the Primary School Curriculum
Mrs Irene Ong (MME/NIE) (30 participants only)

Abstract: This purpose of this workshop is to help participants explore new technologies that can be used in mathematics instruction for the primary school curriculum. They will explore the ways in which tools like virtual manipulatives, calculators, spreadsheet programmes and applets can be use to enhance mathematics teaching, learning and assessment in the classroom.

P 8 - Teaching Data Analysis: Some Ideas for Primary Mathematics Classroom
A/P Kaoy Phong Lee (MME/NIE)

Abstract: Data Analysis includes gathering, representing and interpreting data. In this workshop, the participants will examine the ideas of using glyphs and technology to
motivate pupils to collect, display and use data. As the topic ‘average’ is listed under Data Analysis in the new 2007 primary mathematics syllabus, the workshop will also examine ways to teach average as a statistical idea rather than as a procedural knowledge of “total amount ÷ the number of items”.

P 9 – Calculator in the Primary School
(30 participants only)
Dr Soon Yee Ping (MATHLODGE)

Abstract: In spite of the advance of technology, the use of the Calculator in the Primary for Singapore Schools is almost non-existent. In this tutorial workshop, participants will encounter the use of the calculator in the primary school context through a series of hands-on activities. Problem-Solving skills such as Estimation, Approximation, Handling of data… emphasized in the Curriculum will be illustrated through the use of the calculator.

(30 participants only)
Shad Moarif (Vancouver, Canada)

Abstract: "Shad Moarif, Ed.M (Harvard), from Vancouver, Canada, will engage participants in active and collaborative encounters with segments of his CLSO-MATH program. Participants will be exposed to how mathematical concepts can be visually distilled and offered to learners for their numerical reasoning and interpretation. Participants will design their own selection and tour of various Elementary level topics and work on CLSO-MATH student worksheets. A large segment of the workshop's focus will converge upon the need to discuss Maths teaching approaches that minimise the teachers' "teaching" role while optimising the student's "learning" role by using innovative structure and imaginative educational design."

P 11 – Using Calculator at Primary Level: A Look Ahead
(30 participants)
Dr Fong Ho Kheong

Abstract: This workshop is about teaching mathematics in the classroom with the use of calculator. It will focus on activities involving students in investigation and exploration related to problem solving, mental maths, estimation and number sense. This workshop is also about change, change of attitude towards calculator use in the classroom in computation, exploration, investigation and problem solving. The ultimate objective is to get teachers familiarized with the use of the calculator and help them utilize it to teach mathematics in the most effective way.