

Workshop Title:

Creative Mathematics Hands-on Activities in the Classroom

Workshop Organizer:

Participant Reference No. 3759

Janchai YINGPRAYOON, Dr.rer.nat.

Deputy Director, International College, Suan Sunandha Rajabhat University, Bangkok,
THAILAND

Email: janchai@loxinfo.co.th

Participant Reference No. 4563

Dee Jean ONG

Head of Curriculum and Training, REAL Education Group Sdn Bhd

2-6 Jalan SS19/1G, Subang Jaya, 47500 Petaling Jaya, Selangor Darul Ehsan, MALAYSIA

Email: dj7.ong@gmail.com

*Every participant will receive a fun and creative activity pack. Samples of creative hands-on activities will be demonstrated as follow: Curves in Nature, Reaction Time Test, Simple Balance, Mathematics of Robot arms, Augmented Reality (AR) in Mathematics Education
Duration of the Workshop: 90 minutes.*

Curves in Nature

The materials will be given to participants to find the relation between 2 variables using curves. The relation between the sectors of bamboo tree and their lengths will be studied and discussed.

Reaction Time Test

From the given materials, participants will study about the nature of a free falling object by measuring a reaction time.. The plot between reaction time and the number of participants of that reaction time (frequency) will be studied.

Simple Balance

The participants have to make their own simple balance from given materials. They will learn about the principle of moment and how to calibrate the scale as well as to calculate the error of the measurement. The mathematic relation will be discussed.

Mathematics of Robot arms

A simple robot arm will be constructed using Ice-Cream sticks. The learners have to find the mathematic relations of extended lengths of robot arm.

Augmented Reality (AR) in Mathematics Education

This workshop will describe how to develop a simple AR system for learning mathematics. Sample AR materials used for mathematics education at high school as well as university level will also be discussed. The workshop will show how to generate and view geometrical objects in 3-dimension using mobile phones or computer tablets for better understanding of the mathematical structures.