AIMSSEC - STARTING WITH A PROBLEM NOT A TECHNIQUE

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TARGET AUDIENCE: Teachers and teacher trainers. All phases.

DURATION: 2 hours

MAXIMUM NUMBER OF PARTICIPANTS: 60 or more provided that the room is furnished so that participants can sit around big tables and conveniently work in groups of 6 to 8 together.

MOTIVATION FOR THE WORKSHOP

How can teachers foster mathematical thinking and problem solving skills and still cover the curriculum? CAPS outlines four cognitive levels and allocates 45% of assessment at FET for complex procedures and problem solving. In this workshop, intermediate, senior and FET teachers and teacher educators will encounter and work on some 'low threshold high ceiling' problems suitable for all phases and on some problems designed for the phase with which they work, Participants will solve some problems from the AIMING HIGHER Teacher Network *www.aiminghigh.aimssec.org* and exchange ideas about starting lessons with a problem instead of starting with a technique.

The proposed workshop will give participants the opportunity to try some problems from the AIMING HIGH Teacher Network and to reflect on how problem solving can be integrated regularly into mathematics lessons.

The AIMING HIGH Network has a forum for teachers to seek help, and to support each other, as well as to discuss issues about teaching and learning mathematics in the SA

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context. Each problem has its own thread of discussion about the use of the problem in teaching with links to learners' solutions.

Most teachers see problem solving as a means of practicing mathematical techniques that have been learnt and using and applying the mathematics already known to solving problems in everyday life contexts. Can problem solving also help learners to move from what they know to the next bit of mathematics that they need to learn? Yes, is the answer given by the NRICH Online Mathematics Project, founded by Toni Beardon in 1996 http://nrich.maths.org . NRICH offers a wealth of rich mathematics resources to support this style of teaching for learners from early years through to university. AIMSSEC has adapted some NRICH resources for South African schools. The AIMING HIGH Teacher Network offers South African teachers starting points and problems selected to suit the CAPS curriculum with links to related resources on NRICH.

A selection of problems will be introduced at the workshop with the choice of problems, the timing for group activities, and for discussion, depending on the composition, interests and responses of the audience.