



## Enhancing Mathematics Performance (EMP)

### Aim:

To understand the underlying factors that may explain the different mathematics performance by ethnic groups and subsequently to explore intervention strategies to enhance the mathematics learning of weak pupils.

### Members:

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### What have we done?

#### April 2004 – October 2004:

- **A survey** of 148 pupils (from 2 primary and 2 secondary schools in the East Zone) about their home factors and ways of studying mathematics.
- **In-class reflection of mathematics learning and teaching.** Two primary and two secondary school teachers were observed teaching a mathematics unit lasting about 4 periods (19 lessons, not video-taped). For each lesson, the teacher paused after about 20 minutes and let the pupils tick a checklist about their in-class feelings and thinking and the teacher answered a similar checklist about her/his reflection. The objective was to explore similarities and differences in teacher and pupil perceptions about the purpose and usefulness of classroom activities. In addition, 38 pupil interviews and 18 teacher interviews were conducted.

#### January 2005 – March 2005:

- **Use of Student Question cards to engage learning.** Two primary and one secondary school teacher were observed to use this innovative technique to get their pupils to ask questions during the lessons. The objective was to encourage pupils to become more engaged and active in lessons through asking guided questions. These questions cover the four aspects: *meaning*, *method*, *reasoning*, and *application*. Teacher and pupil interviews were conducted.

#### April 2005 – October 2005:

- Data analysis and report writing.



**M1: What do you mean by ....**  
**M2: What is the difference between .... and ....**  
**M3: Can you use a diagram to show ....**  
**M4: (Your own question)**