# School Self Evaluation Report in Numeracy for Mercy College Woodford

**Context:**

Mercy College Woodford is a small co-educational rural school. Students are for the most part organised in mixed ability classes. From third year there are separate Higher Level and Ordinary Level classes for Irish, English and Maths. A core group of staff members volunteered to form a School Self Evaluation Numeracy team in August 2013, at the beginning of the academic year and they decided to focus on the numeracy skills and knowledge of first year students.

**Focus:**

At a whole- staff meeting at the start of the school year, management and staff decided that they would focus on the SSE of Numeracy in the school year 2013/2014, with a view to putting a school improvement plan in place. All teachers agreed to put a greater emphasis on numeracy in teaching their subject areas.

**SSE process in detail:**

The school decided that steps 1-5 of the 6-step process would be completed in the current school year and that it would implement the school improvement plan for numeracy during the following school year. The school improvement plan for literacy proved to be an invaluable tool in helping the group get started. In fact, the group recognised that numeracy was been held back because of literacy problems. Therefore, from the earliest meetings of the group this link between numeracy and literacy was established. A definition for numeracy was also agreed upon by the group as follows:

*"Numeracy is a life skill. Being numerate goes beyond simply doing sums, it means having the confidence and competence to use numbers and think mathematically in everyday life" www.national numeracy.org.uk.*

It was agreed that the first year grouping would be the target group in the establishment of an improvement plan for numeracy. Three areas arose for special attention, basic calculations, attitude to numeracy and the terms and language associated with numeracy. The following areas of numeracy were explored: timetables, weights, measurements, percentages, price comparisons, fractions, graphs, scale and distance.

**Gathering Evidence:**

The school had baseline data already for the first year cohort:

- Standardised test results (Sten results from Primary School)
- Initial test in Maths, Irish and English conducted in the first two weeks in September
- Results of mid-term results in October
- Christmas test results
- The team carried out a survey of first year students in order to get a clearer picture of attitudes and habits in the area of numeracy
- A survey of first year parents was also carried out in order to establish attitudes and habits of parents in the area of numeracy.

**Analysing Evidence:**

- The test results of incoming students in September ranged from 37% to 81%
- Sten results broadly corresponded to these results
- The first year Maths teachers were surprised by the low scores for questions in problem solving, probability and fractions.
- 100% of parents surveyed agreed that numeracy was relevant in their own lives and in the lives of their child
- 50% of surveyed parents felt their child had difficulty with Maths and numeracy in Primary school
- 70% of parents believed that their view of Maths influenced how their child felt about Maths
- As a result of the first year competency test, problem solving was deemed to be too broad an area in the short term to be addressed and it was decided to focus on fractions, measurements and units initially.

**Teacher's Practice**

All teachers have included strategies for improving numeracy in their subject areas.

A comparison of fractions was posted up in the staffroom for teachers

In second term, it was decided to concentrate on measurements and units

Most teachers use ICT to enhance their lessons

Most teachers use Word Banks for their subject and display common words and terms on their classroom walls. All teachers would ensure that students understood terms such as; solve, find, explain, define, estimate, evaluate, calculate, simplify, describe, expand.

**Targets- The following areas are prioritised for improvement**

Increase student capacity to use fractions

Carry out accurate measurements

Identify units in daily transactions

Decrease the number of errors per exercise

Improve problem solving

**Strategies**

Maths teachers of first and second year students have decided to end the week with a puzzle for ten to fifteen minutes so that maths classes conclude on a high note

As fractions were the first area for improvement, it was decided that simple strategies such as returning results as fractions will be adopted (whole school approach) and students could work out percentages themselves

To improve problem solving, teachers could introduce "Problem of the Week" at the beginning of each week to be discussed on Friday. Students could explain to the entire class how they went about solving the problem

Problem solving will be addressed across the curriculum such as P.E (orienteering, making out fitness plans), Geography (map reading), Home Economics (working out recipes), Business (doing comparisons), Music (musical composition and music notation), Language (essay writing),Technical Drawing( working out scales) etc

The PDST problem solving strategy for Project Maths will be adopted (e.g draw a diagram, look for a pattern, draw a table, simplify the problem, use an equation, work backwards, estimate possibilities)

Teachers can vary teaching methodologies they use and give positive feedback to students both written and oral

An agreed common approach for language and methodology/operations will be adopted by teachers

**Timeframe**

Implementation of the above strategies will commence in September 2014 and will be monitored throughout the year.