



# CASTLETROY COLLEGE

## School Improvement Plan for Numeracy 2015-2016



May 2015

# School Improvement Plan – Numeracy

## 1.1. The Following Areas are Prioritized for Improvement

On the bases of the all the data gathered and analysed in the school self-evaluation in the area of numeracy, the following areas of development are identified

- Half of our students, of all abilities, do not like maths. An action decided by all staff for 2015-2016 is to promote and value effort and positive attitude while giving all students of abilities opportunities to experience challenges and successes in maths. The school will aim to offer gifted children even more opportunities to extend their learning while at the same time supporting those who are less able in the area of maths an effort to increase enjoyment and engagement by all.
- The math competency test results revealed that a large cohort of our students are having difficulty in the area of critical thinking and problem solving. These skills will be modeled, promoted and developed by teachers using a variety of teaching methodologies across all curricular areas. Subject specific actions will be developed in all curricular areas.
- It is essential that over the next five year our teaching staff develop a whole school plan for the explicit teaching of mathematical language across all strands and strand units so as to contribute to pupil's comprehension and vocabulary development in numeracy. The area chosen for year one is statistics. The maths department will aid all staff in their development of a common approach to this area of math.
- Our students need more exposure to numeracy across the curriculum in an effort to truly appreciate how integrated and essential maths is in everyday life and to highlight how much it contributes to a successful and full life. Teachers across all curricular areas will acknowledge numeracy moments in their subject area and to promote and integrate numeracy into their teaching as it arises. Classrooms will be more numerate and students' work in the area of numeracy will be highly visible.

The areas prioritized for improvement as outlined above have been narrowed down into three targets for 2015-2016. Each target has a number of specific actions which will undertaken by the school community in an effort to meet and achieve the targets. The three targets are:

**Target 1:** To increase the % of students who like maths in first and second year from 54% to 60% by developing a positive attitude towards maths in general and towards numeracy in all subject areas.

**Target 2:** To develop a culture of thinking, analysing and problem solving among all of our students and increase the % of first students competent in the area of problem solving from 23% to 33%.

**Target 3:** To give the student's greater consistency in the area of statistics by developing and using a whole school approach and language similar to that used by first year maths teachers.

All three targets and their associated actions are detailed in the tables to follow.

**Target 1: To increase the % of students who like maths in first and second year from 54% to 60% by developing a positive attitude towards maths in general and towards numeracy in all subject areas.**

Actions	Success criteria/ measurable outcomes	Person(s) responsible	Timeframe for action
<p><b><u>Maths Teachers</u></b>            -Maths teachers to be positive and encouraging and to model a 'can do' attitude.             -Maths teachers to praise and value effort and attempt instead of 'right answer'.             -Maths classrooms to be 'safe for mistakes'.             -Maths teachers to make more connections between primary and second level maths.             -the scheme of work in first year maths to be changed to foster engagement from the start of 1<sup>st</sup> year.             -Traffic light system used in all maths classes to monitor and respond quickly to borderline students.             -more able students to be challenged appropriately to sustain motivations and engagement.  <b><u>Parents:</u></b>            - Parents to be informed and to supportive of all school numeracy initiatives.             -Parents to adopt a positive attitude towards maths at home, to praise and encourage effort and attempt and to identify numeracy moments whenever they arise at home.   <b><u>All teachers:</u></b>            -Classrooms to become more numerate (subject specific numeracy wall) and to include students work.             -Numeracy moments identified and acknowledged in all subject areas.            Integration of these numeracy moments into lessons.             -Maths eyes competition to be continued and extended in the school with all teachers attempting to link the theme of the month in their subject area. More use to be made of the numeracy wall in identifying the mathseyes themes as they arise across the curriculum.             -Numeracy wall to be used in a stimulating and engaging manner with more use made of the TV screen.</p>	<p>Student survey</p> <p>Attitudinal survey</p> <p>Enthusiasm for maths.</p> <p>Enthusiasm of students.</p>	<p>Maths teachers</p> <p>AEN teachers supporting maths</p> <p>Parents</p> <p>All teachers</p> <p>All teachers</p> <p>Numeracy team</p>	<p>Sept- Dec</p> <p>Sept- May 2016</p> <p>Sept- May 2016</p>

-Numeracy week integrated with maths week with a focus on mental maths and problem solving games and quizzes.			
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**Target 2: To develop a culture of thinking, analysing and problem solving among all of our students and increase the % of first students competent in the area of problem solving from 23% to 33%.**

Actions	Success criteria/measurable outcomes	Person(s) responsible	Timeframe
<p><b>Teachers</b> will more frequently encourage students to :</p> <ul style="list-style-type: none"> <li>-use stop and think poster</li> <li>- think, pair and share</li> <li>-answer open ended questions,</li> <li>- develop, elaborate on and expand answers.</li> <li>- decipher text</li> <li>-engage in more group work</li> <li>-go through the design process (tech/art)</li> <li>-go through investigative process (science)</li> <li>-summerise stories/poems orally with each other.</li> <li>-mindmap</li> <li>-answer higher order questions with higher order thinking (inductive and deductive. HOTS not LOTS.</li> <li>-THINK will be introduced as a problem solving rubric</li> </ul> <p><b>Whole school initiatives</b></p> <ul style="list-style-type: none"> <li>- Problem of the week competition continued and extended</li> <li>-Games club further developed.</li> <li>-Sudoku and other maths puzzles of varying difficulty placed in all classrooms.</li> </ul>	<ul style="list-style-type: none"> <li>- Oral questioning</li> <li>- level of answering in class and homework</li> <li>-monitor engagement in class</li> </ul> <p>Maths competency test administered to a sample of first years Sept 2015.</p> <p>-Current 1<sup>st</sup> year group tracked and assessed in the area of problem solving with 2<sup>nd</sup> year competency test.</p> <p>-Maths department to monitor problem solving in all tests.</p> <p>- all teachers</p>	<ul style="list-style-type: none"> <li>- numeracy team</li> <li>-numeracy team</li> <li>-maths department</li> <li>-all teachers</li> <li>-all teachers</li> <li>-all teachers</li> <li>-Numeracy team.</li> </ul>	<p>Sept- Dec Initially</p> <p>Sept-Dec initially</p>

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**Target 3: To give the student's greater consistency in the area of statistics by developing and using a whole school approach and language similar to that used by first year maths teachers.**

Actions	Success criteria	Person responsible	Timeframe for action
<ul style="list-style-type: none"> <li>-Maths department to agree on common to statistics.</li> <li>-whole staff training in area of statistics</li> <li>-poster with key words in statistics in all classroom.</li> <li>-more detailed booklet produced for each staff member with good examples of statistics in everyday life.</li> </ul>	<ul style="list-style-type: none"> <li>- Teacher feedback on their competency in the area of statistics and their confidence in the use of a common approach.</li> </ul>	<ul style="list-style-type: none"> <li>-Maths department</li> <li>-Maths department</li> <li>-Numeracy team</li> </ul>	<p>September 2015- December 2015</p>

<p><b>Monitor and Review</b></p>	<ul style="list-style-type: none"> <li>- Numeracy team meetings - once per ½ term</li> <li>- Survey 1<sup>st</sup> year students in September and then again in April</li> <li>- Survey 2<sup>nd</sup> year students to identify any change.</li> <li>- Resurvey staff and students April 2015</li> <li>- All staff to monitor and discuss at all subject specific meetings.</li> </ul>
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