**Bekan N.S. School Improvement Plan - Numeracy**

**School Improvement Plan for Numeracy 2014-2018**

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| **Bekan N.S ~ School Improvement Plan for Numeracy** |
| **Baseline data** | * Information gathering base on Standardized Testing – Sigma –T Testing; NRIT; MaLT; End-of-term tests***. [ See reports, graphs etc. in folder]***
* Parent & Pupil feedback from surveys on Numeracy [Conducted online – see reports, graphs]
* [Teacher Mathematics review shee](file:///C%3A%5CUsers%5CUser1%5CDesktop%5CSchool%20work%5CKelly.%20V%5CPlanning%20Diary%5CIn-School%20Planning%202013-14%5CSSE%202013-14%5CNumeracy%5CChecklists%20etc%5CMaths%20Review%20Checklist%20for%20Senior%20class%20VK.docx)t & MaLT test on tracker pupils [[included in SSE report]](file:///C%3A%5CUsers%5CVKelly%5CDesktop%5CIn-School%20Planning%202013-14%5CSSE%202013-14%5CTools%20Docs%20%20for%20SSE%20Bekan%20NS%20Literacy%5CBekan%20NS%20Docs%5CSchool%20Self-Evaluation%20Report%20Bekan%20NS.docx)
* Children’s copies, tasks etc, & teacher observation.
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| **Attainment of Curriculum Objectives:**  | Based on analysis of the data above the following conclusions are drawn in relation to attainment of curriculum objectives in Numeracy:Analysis of standardised test data over the past two years along with evidence elicited through parent/student surveys and teacher input indicate that the area of Fractions appears to pose difficulty at many levels and requires a targeted approach* Throughout all classes analysis of Standardised Tests indicates that over the past two years over 73% of students performed above the 50th percentile. Almost 25% performed between the 85th and 98th percentile. 63% performed above the 51st percentile in 2012-13, with 27% performing between the 85th – 98th percentiles.
* The data indicates that the number of children performing in the low to mid-percentile bands is either on a par with or below the normal levels while the number of children performing in the 85th to 98th percentile band is significantly above the normal level.
* The number of children performing below the 10th percentile has decreased significantly over the two-year period assessed.
* Our pupil survey indicated that 65% had a very positive attitude to Maths, felt confident in their ability at and felt that Maths is a very important subject.
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Over 75 % of parents indicated that their children had a positive attitude to Mathematics and were progressing well. 80% felt they knew their children’s strengths in Maths. |
| **Pupils engagement in Learning:**  | * Children are generally confident and motivated regardless of their ability level.
* Teacher, Pupil and parent surveys indicate that pupils engage readily with Maths ICT’s and these generally act as a motivational factor in the teaching of Maths.
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| **Teaching Approaches:** | * Teachers will continue to use a range of methodologies including: active learning including play, guided activity discovery and teacher modeling;
* Collaborative and small group-teaching (introduced in classes 3rd to 6th where children are experiencing difficulty).
* Teaching approaches are planned to meet the requirements of varying learning styles and abilities of students.
* A good range of concrete materials and resources are used by teachers in the classroom at all levels.
* A wide variety of assessment tools and methodologies e.g. Standardised Testing [Sigma-T]; MaLT; Teacher designed tasks and tests are used in assessment of and for learning.
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| **Summary of main areas requiring improvements** | Teacher input and co-ordinated evidence indicates that one of the strands that requires a targeted whole-school approach is ‘***Number***’ in the Infant room and the number strand unit ‘***Fractions***’ from First to Sixth Class inclusive. |
| **Actions** | * Teachers to familiarise themselves with ‘3 Model’ approach to the teaching of

fractions. * Teachers are to utilise ‘3 Model’ approach in their teaching of fractions
* Pupils are to use the ‘3Model’ in their learning of Fractions
* Provide useful resources to consolidate teaching and learning in Fractions.
* Link the Language of Mathematics to teaching and learning of fractions.
* To have a whole school approach to Learning Support / Resource teaching of fractions at each class grouping level.
* To utilise and provide concrete, pictorial ad abstract experiences in the teaching and learning of fractions.
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| **Targets** | **Required Actions** | **Persons Responsible** | **Success Criteria / Measurable Outcomes** | **Review Dates** |
| * To improve by 5% the number of children scoring 50% and over in the number strand in standardised tests
* Fractions , from the Number Strand, as relevant to different classes ( ***First-Sixth*** ) will be focussed on (2014-2015)
* In infants, the focus will be on the number strand. (2014-2015)
 | * Each teacher to have hard copy of pdst booklet ‘Fractions: Teacher’s Manual’
 | Principal | Copies available  | Start Date: 1 Sept. 2014Review DateJune 2015 |
| * Inservice Whole School Seminar –

 Fractions  | Principal/ numeracy link teacher | PDST support in-school on 10th Sept. 2014 |
| * Common Approach to ‘Culture of

Maths’{cf: pdst Booklet p11} | All Staff – CP hours CPD | Children’s work samples |
| * Familiarisation with the common

fundamental facts about fractions [pdst booklet – P13] | Class Teachers |  |
| * Familiarisation with the possible pupil misconceptions about fractions
 | Class Teachers |  |
| * Familiarisation with the ‘3 Models’ of teaching fractions
 | Class Teachers |  |
| * Organisation and sourcing of useful & appropriate resources for the teaching and learning of fraction for each class grouping
 | Class Teachers & Numeracy Link teacher |  |
| * Teachers to list sample questions and appropriate teacher language in Eliciting, Supporting, Extending the promoting of mathematical thinking.
 | Class Teacher | Teacher Lists |
| * Whole Class Assessment
 | Class Teachers | End of term; End of year; Standardised Test evidence |
| * Assessment: Individual Pupil
 | Class Teacher/LST | End of term; End of year; Standardised Test evidence |

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| **Year 1 – 2014-15** | **Year 2 -2015-16** | **Year 3 – 2016-17** |
| * Familiarisation with fundamentals of fraction facts
* Familiarisation with common misconceptions of fraction facts
* Trial ‘3 Model’ strategy in

fraction lesson delivery* Collect / Source and use

appropriate concrete resources for each class grouping * Copy of ‘Fractions: Teacher’s Manual for each teacher {pdst Booklet}
* Familiarisation with language to ‘elicit / support / and extend’ pupils mathematical thinking {p91, 92}
* Creation of classroom culture to enhance mathematical thinking {p11}
* Teacher to familiarise and trial ‘Fraction Learning Trajectory’ appropriate for class grouping {p 21}
* Teacher to familiarise and trial ‘Sample Teaching and Learning Experiences’ appropriate for class grouping{p 31}
* In Class Support to use ‘3 model’ strategy / language to support class

teaching.{Differentation} | * Teachers to be confident with fundamentals of fraction facts.
* Teacher and pupils to be familiar with common misconceptions of fraction facts
* ‘3 Model’ will form the basis of teaching strategy in fraction lesson delivery
* Pupils to use appropriate concrete resources for each class grouping
* ‘Fractions: Teacher’s Manual to inform and guide each teacher in the teaching and learning of fractions {pdst Booklet}
* Teacher to use language to ‘elicit / support / and extend’ pupils mathematical thinking {p91, 92}
* Class T to promote and make explicit the ‘culture of mathematical classroom’ {p11}
* Teacher to use ‘Fraction Learning Trajectory’ appropriate for class grouping {p 21}
* Teacher to use ‘Sample Teaching and Learning Experiences’ /Games / Activities appropriate

for class grouping {p 31}* In Class Support to use ‘3 model’ strategy / language to support class teaching.{Differentiation}
* Linkage: Linking strategies to other maths strands. {Table 1.1, 1.2, 1.3}
* Pupils to use estimation to aid answering fraction questions [P. 17]
 | * Sustain and consolidate year 1 & 2 objectives
* ‘3 Model’ will form the basis of teaching strategy in fraction lesson delivery, using appropriate resources, from concrete, to pictorial to the abstract, developing

mathematical thinking. * Pupils to use estimation to aid answering fraction

questions {p17} * Pupils to be competent in representing fractions in

multiple formats * Teacher to use language to ‘elicit / support / and

extend’ pupils’ mathematical thinking and pupils to becompetent in responding appropriately * Class Teacher to promote and make explicit the ‘culture of mathematical classroom’ {p11}
* Teacher to use strategies in teaching and learning of

other maths strands. {Table 1.1, 1.2, 1.3} * Applying Strategy to Problem Solving situations
* Individual & Class Assessment: Fractions Learning Trajectory
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| **Year 2- Numeracy****Focus:Number- Place Value, Decimals and Percentages** |
| **Targets** | **Required Actions** | **Persons Responsible** | **Success Criteria / Measurable Outcomes** | **Review Dates** |
| * To improve by 5% the number of children scoring 50% or over in the Numbers strand of the standardised tests
* Focus on place value ( Junior Infants- 6th Class)

Decimals- (3rd to 6th)Percentages ( 5th and 6th)* Focus on the practical use of place value, decimals and percentages in real life and apply it to everyday situations
* Integrate Place Value, Decimals and Percentages with other areas of the maths curriculum, in particular Fractions from the Number strand.
 | * The Strand Units of Place Value, Decimals or Percentages will be targeted either individually or integrated at least every month by each teacher (Junior Infants to 6th class)
 | Class Teachers/ LST | Children’s scores in this area will show an improvement on last year | Start Date: 1 Sept. 2015Review DateJune 2016 |
| * The place value, decimals and percentages strand units will be integrated with other strands , in particular fractions from the number strand
 | Class Teachers/ LST | Children will recognize and link place value, decimals and percentages to other areas of maths |
| * Suitable concrete materials will be gathered and stored so that each class will be able to avail of a practical and hands on approach to these strand units.
 | All Staff – Numeracy Link Teacher | Children’s work samples |
| * Displays dedicated to Place Value, Decimals and Percentages will be in each classroom, focusing on a different strand unit each term.
 | Class Teachers | Children will be see Place Value, Decimals and Percentages being used in their environment |
| * Familiarisation with the possible pupil misconceptions about place value, decimals and percentages
 | Class Teachers |  |
| * Teachers to list sample questions and appropriate teacher language in Eliciting, Supporting, Extending the promoting of mathematical thinking.
 | Class Teacher | Teacher Lists |
| * Whole Class Assessment
 | Class Teachers | End of term; End of year; Standardised Test evidence |
| * Assessment: Individual Pupil
 | Class Teacher/LST | End of term; End of year; Standardised Test evidence |

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| **Year 1 – 2015- 16** | **Year 2 -2016- 17** | **Year 3 – 2017- 18** |
| * Familiarisation with fundamentals of number facts in particular place value, decimals and percentages
* Familiarisation with common misconceptions of place value, decimals and percentages
* Teachers will adapt the 3 model approach as used with fractions to place value, decimals and percentages
* Collect / Source and use

appropriate concrete resources for each class grouping * Familiarisation with language to ‘elicit / support / and extend’ pupils mathematical thinking {p91, 92}
* Creation of classroom culture to enhance mathematical thinking {p11}
* Teacher to integrate place value, decimals and percentages with another strand ( Fractions-1/10 is 0.1 or 10%)
* Teacher to familiarise and trial ‘Sample Teaching and Learning Experiences’ appropriate for class grouping{p 31}
* In Class Support to use ‘3 model’ strategy / language to support class

teaching.{Differentation} | * Teachers to be confident with fundamentals of number facts : place value, decimals and percentages
* Teacher and pupils to be familiar with common misconceptions of measures
* Pupils to use appropriate concrete resources for each class grouping
* Pupils will use the 3 Model approach to solving problems involving place value, decimals and percentages
* Teacher to use language to ‘elicit / support / and extend’ pupils mathematical thinking {p91, 92}
* Class T to promote and make explicit the ‘culture of mathematical classroom’ {p11}
* Teacher to use ‘Sample Teaching and Learning Experiences’ /Games / Activities appropriate

for class grouping {p 31}* In Class Support to use ‘3 model’ strategy / language to support class teaching.{Differentiation}
* Linkage: Linking strategies to other maths strands. {Table 1.1, 1.2, 1.3}
* Pupils to use estimation to aid answering measures questions
 | * Sustain and consolidate year 1 & 2 objectives
* ‘3 Model’ will form the basis of teaching strategy in number lesson delivery, using appropriate resources, from concrete, to pictorial to the abstract, developing

mathematical thinking. * Pupils to use estimation to aid answering number

questions {p17} * Teacher to use language to ‘elicit / support / and

extend’ pupils’ mathematical thinking and pupils to becompetent in responding appropriately * Class Teacher to promote and make explicit the ‘culture of mathematical classroom’ {p11}
* Teacher to use strategies in teaching and learning of

other maths strands. {Table 1.1, 1.2, 1.3} * Applying Strategy to Problem Solving situations
* Individual & Class Assessment: Place Value, Decimals and Percentages
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| **Reviewed by Board of Management on: 24th September 2015****Signed:** **Chairperson****\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |