**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:\Users\User1\Desktop\School%20work\Kelly.%20V\Planning%20Diary\In-School%20Planning%202013-14\SSE%202013-14\Numeracy\Checklists%20etc\Maths%20Review%20Checklist%20for%20Senior%20class%20VK.docx)t & MaLT test on tracker pupils [[included in SSE report]](file:///C:\Users\VKelly\Desktop\In-School%20Planning%202013-14\SSE%202013-14\Tools%20Docs%20%20for%20SSE%20Bekan%20NS%20Literacy\Bekan%20NS%20Docs\School%20Self-Evaluation%20Report%20Bekan%20NS.docx) * Children’s copies, tasks etc, & teacher observation. |
| **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.   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. |
| **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. |
| **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. 2014  Review Date  June 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 be  competent 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. 2015  Review Date  June 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 be  competent 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 |
| **Reviewed by Board of Management on: 24th September 2015**  **Signed:**  **Chairperson**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | |