

Scoil Náisiúnta Bhantiarna Lourdes

“Mol an óige ‘is tíoctaidh sí”

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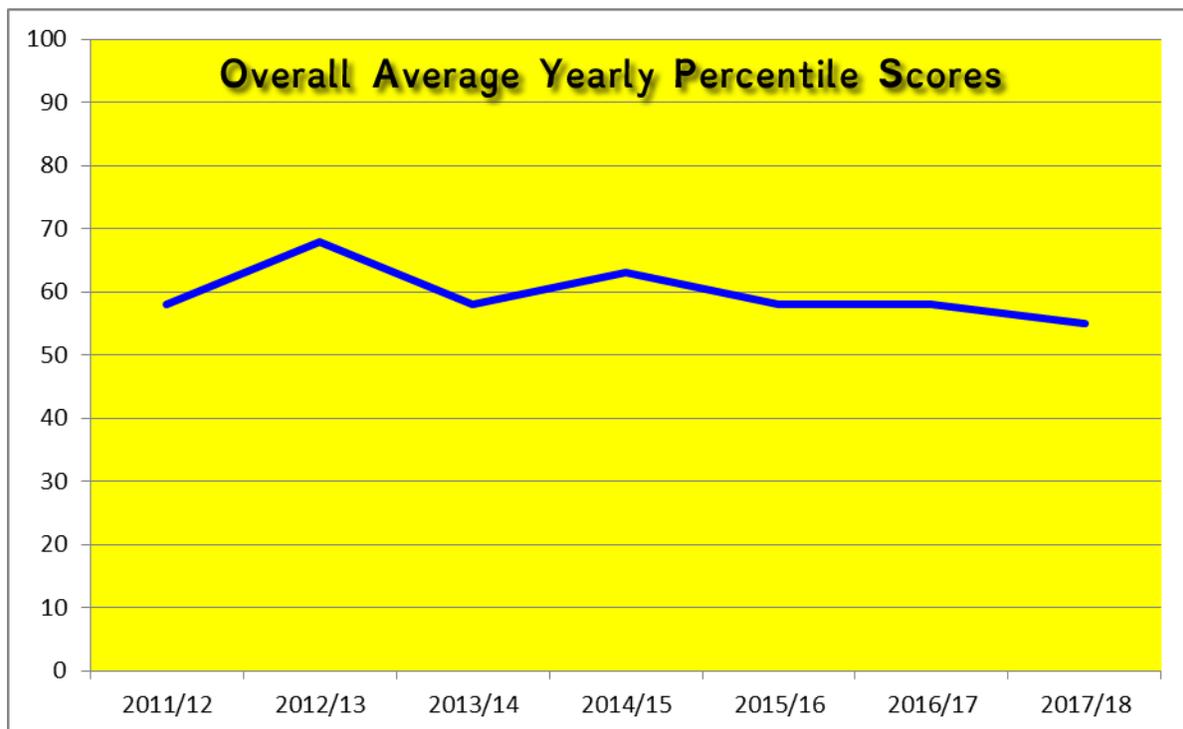
School's Guiding Principles:

- Pupils will explore mathematical ideas in ways that maintain their enjoyment of and curiosity about Mathematics
- The school acknowledges that mathematics learning is a lifelong process that begins and continues in the home and extends to school and community settings
- Working together in teams and groups enhances mathematical learning, helps students communicate effectively, and develops social and mathematical skills.
- Every lesson (whenever possible) is a Numeracy lesson
- There is a necessity for awareness of Maths in the real world
- The teaching of Mathematics will place emphasis on mathematical language in problem solving (our school has an [Agreed Whole School Maths Language](#))
- The school acknowledges the importance of a Maths rich environment in the classroom and school
- All Maths lessons will use manipulatives materials whenever possible. The use of Numicon is used whenever possible and widely used in all Support Rooms.
- The school places emphasis on awareness of Maths in our local environment
- The school will promote Mathematics as part of the school's STEM culture and yearly application for the Discover Primary Science and Maths Awards

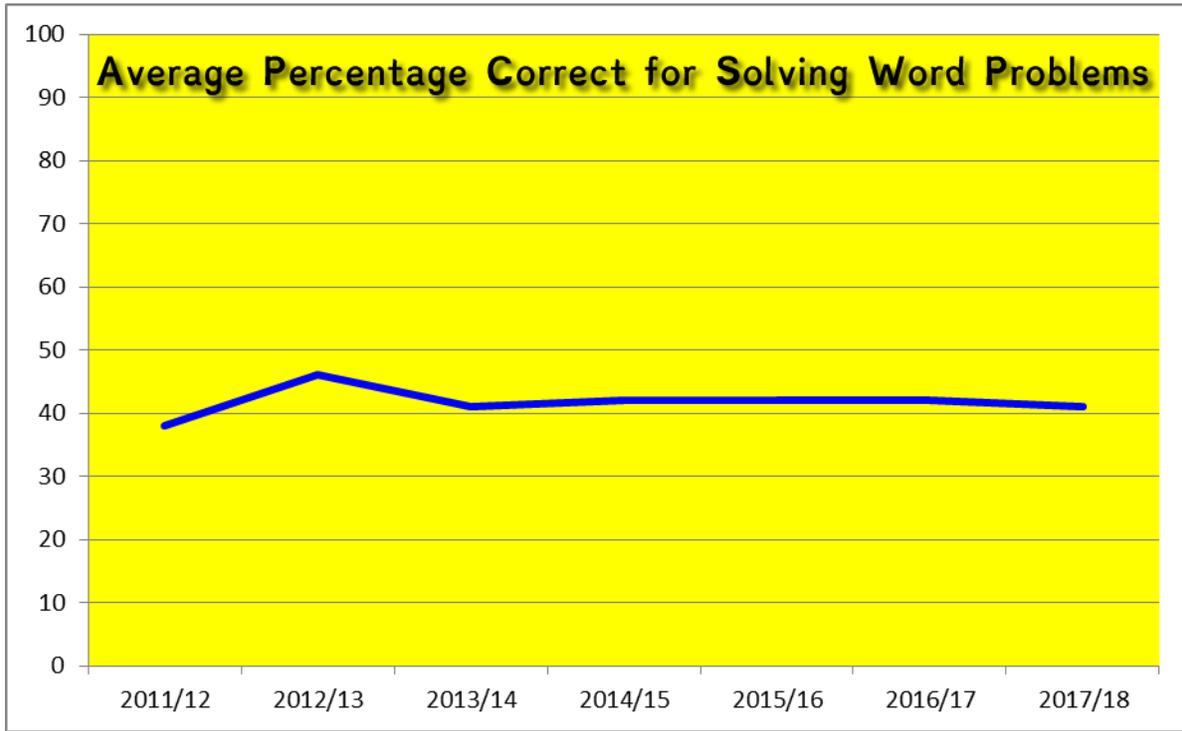
Review: The standard of Mathematics is generally very good in the school with all classes from 2nd to 6th (excluding Third @ average percentile of 37) well above national norms. The school has had notable success in recent years getting to the National Finals of the Pangea Mathematics Olympics in Trinity College in 2016 and winning a silver medal in the finals in 2017 and again getting three pupils to the finals in 2018. Seven pupils also participated in the National Finals of the Bebras Thinking & Computational Competition in Maynooth

University in 2017 and two in 2018 and the school has been awarded a Discover Primary Science & Maths Award for 2014, 2015, 2016, 2017 and 2018.

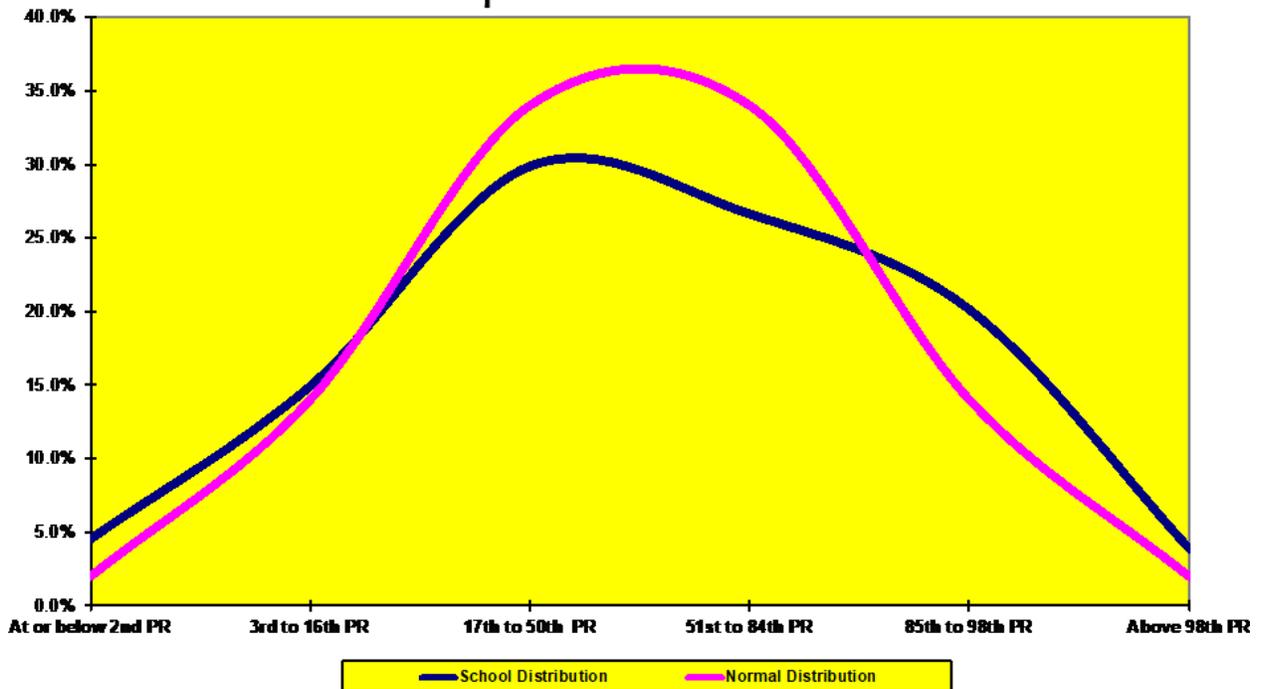
However, it appears that the pupils below the 50th percentile improved most with all targets for 2017/2018 either met or surpassed. Those above the 50th percentile did not appear to do as expected. This would indicate the need for more emphasis on the above average pupils for next year and a review of Maths teaching in general if we are to maintain the high standards in Maths.



Maths Data Results June 2018



Maths Percentiles Compared to Normal Distribution June 2018



Targets for 2018/2019:

Overall Combined Target for our 7 weakest pupils: (7 pupils in the zero to 2nd percentile band): To move 3 of these pupils into the next band.

Overall Combined Target for our second weakest group: (23 pupils in the 3rd to 16th percentile band): To move 10% to the next band

Overall Combined Target for our next band of pupils: (46 pupils with scores from the 17th to the 50th percentile): To move 10% to the next band

Overall Combined Target for our 41 next strongest pupils: (41 pupils with scores from the 51st to the 84th percentile): To ensure that all pupils remain above the 51st percentile and move 5% to next band

Overall Combined Target for our 41 next strongest pupils: (31 pupils with scores from the 85th to the 98th percentile): To ensure that all pupils remain above the 51st percentile and move 10 pupils to the 99th percentile

Minimum Targets for our Most Able Pupils:

Overall Combined Target for our 6 strongest pupils: (6 pupils with scores at the 99th percentile - this is the highest possible score): To ensure that these pupils remain at the 99th percentile.

Problem Solving Data for SIGMA-T June 2018 and SIGMA-T June 2017 to be recorded for each pupil by class teacher as baseline data.

Measures to be undertaken to raise Numeracy levels in Infants

- ✓ Use of manipulatives materials every day. (Numicon, number rods, etc)
- ✓ Five - 15 minutes of mental maths every day. (counting on/back, adding, take away)
- ✓ Number rhymes and songs for each topic being covered.
- ✓ Maths visible in the classroom/Maths display board and Maths table.
- ✓ The Maths table can be used for early finishers and have activities based on the topic being covered that day or revision of topics already covered to reinforce a Maths concept.

- ✓ Some activities for early finishers are Tangrams, jigsaws, matching and sorting activities, sequencing activities, work sheets.
- ✓ Each teacher will use Maths stations at least once a month.
- ✓ Number lines will be available for each pupil.
- ✓ Maths will be a part of the Aistear topic being covered. This will help the children see that Maths is part of their everyday lives.
- ✓ Maths in the environment:- in the corridor and also Maths trails around the school.
- ✓ Teachers will incorporate Ready Set Go Maths into their lessons
- ✓ Use of I.T.- Busy at Maths online resources (CJ Fallon), Planet Maths (Folens)
- ✓ Later in the year: Maths for Fun

Measures to be undertaken to raise Numeracy levels in First & Second Classes

- ✓ Each lesson will begin with 15 minutes of Mental Maths to include collaborative learning and daily mental test in Master Your Maths.
- ✓ Each group will have an activity box to include: Numicon box; 100 number line; 100 square; base 10 set with tens and units and counters.
- ✓ Teacher conferencing with individual students focusing on how they solves problems.
- ✓ Problem Solving: focus on one strategy per month.
- ✓ Use of CLUES
- ✓ Station teaching once a fortnight at least
- ✓ Use of Maths Trails

Measures to be undertaken to raise Numeracy levels in Third & Fourth Classes

- Daily layout:
 - 11:10-11:25- Mental Maths
 - 11:25- 12:05- Current Topic
 - 12:05-12:15- Skip counting and tables games. E.g.: Tables Champ
- Problem Solving every Thursday
 - Following CLUES

- Using individual whiteboards instead of copies. Problems to be taken from Super Sleuth, Mathemagic, Busy at Maths, Cracking Maths and Prim-Ed Problem Solving and displayed on a 'Who Wants to be a millionaire' PowerPoint.
- Each child will have access to:
 - Counters
 - Hundred Square
 - Multiplication Squares
 - Numicon
 - Clocks
 - 2-D and 3-D shapes
 - Individual whiteboards, markers and erasers
- Maths Displays- skip counting, CLUES, time, fraction walls, shapes, hundred square
- Game based learning
- Weekly timed tables test. Ballard and Westwood tests to be used 3 times in the year- Christmas, Easter and June.
- End of topic tests. End of term assessments- Mathemagic and Busy at Maths
- Station Teaching once a fortnight - 4 stations
 1. Tables Station- Completing tables activities from 'Tables Expert' in dry wipe pouches. Taking turns to come up and use 'Hit the Button' (Topmarks website) timed tables activity.
 2. Problem Solving activity- working as a group to solve the problem. E.g.- Crack the code
 3. Station based on topic being covered
 4. Station based on topic being covered
- Homework- One piece of mental maths, learning tables and an exercise based on topic being covered. After Christmas revision sheet to be used- 4/8 questions to be completed over the week from a mixture of topic which have been covered.

Measures to be undertaken to raise Numeracy levels in Fifth & Sixth Classes

- Share the problem solving box
- Word problem a day, to be solved in own time for the following day
- MENSA Maths for fast finishers
- Logic Word Problems (Prim-Ed), 2 per week

- Super Sleuth Maths books for word problems
- Individual whiteboards (to be ordered) for tables, estimation, mental maths etc.
- Math Antics Youtube Channel
- Team Teaching/Support
- Problem solving vocabulary posters to be displayed in classroom
- Maths trails when possible
- Competitive teams for problem solving (once per half-term)
- Write your own word problem and swap with partner to solve
- Online Countdown for mental maths
- Split class to get extra hour of maths per week

Whole School Approach to Problem Solving in Mathematics

- ✓ Common mathematical language agreed
- ✓ Agreed approach to number operations
- ✓ Pupils “talk-out” the steps of computation and problem solving
- ✓ Problems set for pupils will be practical and related to pupils’ everyday experiences whenever possible
- ✓ Use of Super Sleuth by Gill & MacMillan which focuses on the ten main problem-solving strategies, developing problem-solving skills, encouraging higher order thinking and enabling pupils to take responsibility for their own learning. (1) Trial and improvement, (2) Working backwards, (3) Working systematically, (4) Logical reasoning, (5) Visualisation, (6) Patterns, (7) Make a table, (8) Act it out, (9) Make a model and (10) Simplify
- ✓ Use of acronym **CLUES** (**C**ircle the numbers and key words, **L**ink with operation needed, **U**se a strategy (**RUDE**), **E**stimate and calculate and **S**ummarise how you got your answer).
- ✓ Classrooms will have suitable laminated Number Line on desks
- ✓ Teachers to use NRICH “[Developing a Classroom Culture That Supports a Problem-solving Approach to Mathematics](#)” which provides practical ways to investigate aspects of the classroom culture.
- ✓ Problem solving will also be part of the school’s [Enrichment Programme](#) and ISAK9 will be used during the programme.