DEIS/SIP PLAN – NUMERACY - 2021-2024

Year 1 of 3

Overall targets for the three-year period 2021-2024: (targets set June 2021)

- *a 3% increase in the percentage of pupils scoring above the 50th PR **overall** - from 69% to 72% (new baseline)*
- *a 3% increase in the percentage of pupils scoring above the 50th PR in the **number strand** - from 77% to 80% (new baseline)*
- *a 3% increase in the percentage of pupils scoring above the 50th PR in the **measures strand** - from 65.5% to 68.5% (new baseline)*
- *a 3% increase in the percentage of pupils scoring above the 50th PR in the **problem solving strand** - from 67% to 70% (new baseline)*

Specific targets 2021-2022

- *a 1% increase in the percentage of pupils scoring above the 50th PR **overall** - from 69% to 70%*
- *a 1% increase in the percentage of pupils scoring above the 50th PR in the **number strand** - from 77% to 78%*
- *a 1% increase in the percentage of pupils scoring above the 50th PR in the **measures strand** - from 65.5% to 66.5%*
- *a 1% increase in the percentage of pupils scoring above the 50th PR in the **problem solving strand** - from 70% to 71%.*

The staff has decided to focus on the following domains-

Learner Outcomes (Domain 1) and Learner Experiences (Domain 2)

Domain 1 Objectives

- Pupils demonstrate mathematical knowledge, appropriate to their stage of development, as individuals and as members of a group. They apply this knowledge to learning in maths lessons and in other curriculum areas.

Domain 2 Objectives

- Pupils understand and explain the purpose of the maths learning tasks they are engaged in.
- Pupils are able to report on, present, and explain the process and outcome of maths learning activities to a competent level.
- Pupils ask questions and suggest possible mathematical solutions confidently. They are willing to risk incorrect responses and accept that mistakes are part of the learning process.
- Pupils assess their progress and are aware of their strengths and areas for development as learners.
- Pupils make meaningful connections between learning in maths and other areas of the curriculum and between school-based learning and learning that takes place in other contexts.
- Pupils are aware of the key skills underpinning the maths curriculum and of their relevance to present and future learning and real-life learning.

Targets	*Specific Actions*	*Personnel*	*Timing*	*Monitoring*	√
Developing the skills of APPLYING & PROBLEM-SOLVING, COMMUNICATING & EXPRESSING, REASONING					
1. All teachers to use RUDE approach to problem solving.	• Teacher teaches each strategy by modelling. • RUDE strategy poster/slide to be displayed in each classroom. • Problem of the Day/ Week challenge.	All teachers	Ongoing	• Teacher Observation • Outcomes of Sigma-T • Teacher Observation-Tracker children's results noted. • Pupil profiles • Feedback from Staff	[ ]
2. Improve the children's own ability to explain the process they used, when solving a problem/ completing a maths task, drawing from the maths language and strategies developed year on year.	• Students requested to explain how they got their answer. • Students invited up to the whiteboard to demonstrate. • High level of discussion - Maths Talk resources shared in Drive • Problem of the week challenge	All teachers	Ongoing	• Feedback from pupils Teacher observation	[ ]
3. Consolidate the methodologies and language used in the teaching of maths.	• Develop Maths Language Charts in every room. This is to be added to throughout the year. • Continue to display maths operation words in every room.	Class/ SEN staff	September - ongoing	• Teacher designed tests • Pupil profiles • Maths Wall visible in each classroom and updated regularly	[ ]
4.Use of Izak 9 by teachers in 4th-6th in order to develop and improve pupil's processing and problem skills and to improve their communication skills and their use of the language of maths through collaborative, open-ended investigation.	• CPD for senior class teachers • Teachers share the Izak account *Minimum Usage:* • Fourth class - 2x term • Fifth - 1x month • Sixth - 1x fortnight	Michelle Senior class teachers	Sept 2021 Ongoing	Feedback from staff and pupils involved (June2022)	[ ]
5.Use "Ready Set Go Programme" as the main resource in the Junior School (and complement this with Planet Maths) • *Sept-Jan (M-F) JI/ SI*	• To use the RSG materials regularly to support the implementation of this programme in the Junior School.	Jun/ Sen teachers/ SEN team	Ongoing	Teacher observation	[ ]

	• Teachers to follow Ready Set Go Programme as set out in Resource Book and year plan. • Differentiate for higher ability students. Accelerate to SI/1st Power Hour if necessary.				
6. Maths Recovery strategies extension throughout the school through the **OBT Mata Project**. Focus on Rang 3 this year.	• Training for staff (focus on Rang 3 staff) • Rang 3 activities in class – strategies to be decided in Term 1 once staff is trained. (implementing stage PIEW) • Resources to be sourced and organised through OBT	MM & other staff MM & OBT	ongoing	• Feedback from trained teachers	[ ]
Develop the skills of UNDERSTANDING & RECALLING, IMPLEMENTING					
1. Develop facility in Mental Maths. Continue the 10 minute mental maths/place value activity time at start of each maths lesson throughout the school	• Teachers to use appropriate mental maths/place value warm-up activities • Activities to be planned and referenced in cuntas míosúil (eg Counting Choir- to be used as an oral Maths Activity.) • Shared Drive folder for Maths Talk/ Mental Maths activities	All teachers Michelle	Ongoing throughout the year	• Record Activities in C.M • Teacher observation • Feedback at staff meeting • Improvements in speed and accuracy of computation skills (again observed by teachers and noted when necessary)	[ ]
2. To improve the pupils' ability to memorise and recall maths tables swiftly, without having to count	• Brief tables sessions per day: Use of a variety of tables games and activities. • Addition and subtraction tables to be learned by end of 2nd multiples by end of 3rd and multiplication and division by end of 4th class	All teachers	Ongoing	• Weekly tables (timed) tests and teacher observation	[ ]

3. Improve the pupil's knowledge of the relationship between fractions and decimals (and percentages when appropriate) particularly in the context of measures.	• Teaching of measures to be postponed until fractions, decimals (if applicable) and percentages (if applicable) have been taught. • Increase use of concrete materials and purchase more if necessary. • Fraction, decimals and percentage equivalents to be learned by heart and it is mandatory to display a chart detailing these on the maths display in the relevant classes. • Incorporate fractions, decimals and percentages into the 10 minute mental maths session at appropriate class level.	Class / Sen staff	Ongoing throughout the year	• Outcome of Sigma-T • Teacher observation & teacher designed tests	[ ]
4. Maintain a Numeracy Power Hour Programme (based on the Maths Recovery Station teaching Model) as follows • *1st 1: Sept. – mid Nov* • *1st 2: mid Nov - Feb* • *Sen. Inf. 1: Mar. & April* • *Sen. Inf. 2: May & June*	Use a range of non-count by 1 strategies as follows: • *Facility with adding and subtraction using ten as a base* • *Doubles./ Near doubles.* • *Making a 10/100/1000.* • *Compensation for addition/ subtraction.* • *Commutative* • *Using addition for sub. & vice versa.* • *Horizontal algorithm to solve every day.* • *Using multi. for division and vice versa (See pg. 24 of Maths Recovery Folder)* • *Use of M/R arrays for multiplication and division* • Administer MR pre- screeners to group the pupils. • Information meeting to be held pre-Power Hour for parents of pupils in classes new to P. Hour	All teachers in PH team and class teachers involved	Ongoing throughout the year	• Feedback/Test outcomes. • Teachers Observation (recorded on checklist). • Pre and Post Power Hour Assessment (based on Maths Recovery Screeners) Assessment 1.1 at beginning and end of each term, administered by SEN staff involved. • Results collated • Feedback from parents/pupils • SEN staff –written review	[ ]

Develop the skills of INTEGRATING & CONNECTING					
1. Integrate the use of maths skills and knowledge into other curriculum areas.	• Integration between maths and other curriculum areas (eg science/ PE) to be noted in CM • Teachers link to skills in other subjects (BBU/ science skills etc.) • Related skills in Maths/ Science/ BBU chart for staff	Class teachers MM, BK, MG	Ongoing throughout the year June 2021	Feedback from staff and pupils	[ ]
2. Explicitly teach and name the maths skills. Improve pupils' ability to identify their strengths and weaknesses in relation to these skills and the lesson objectives. Improve pupils' ability to assess their own learning and progress.	• Use of WALT and WILF posters/slides on IWB • Teachers name maths skills and identify with pupils • Pupils use WALT/ WILF for self/ peer assessment. • Mangahigh targets	All staff	ongoing	Feedback from staff/ pupils Mangahigh reports	[ ]
3. Develop students' confidence and capacity.	• Build a positive classroom culture where 'we learn from mistakes' and a growth mindset approach of 'I can't do it YET.' • Teacher emphasises where pupils have the first few steps in a process right, modelling that mistakes are okay etc. • Shared Drive folder with Math Anxiety resources for teachers	All staff Michelle	ongoing	Feedback from pupils/ staff/ parents	[ ]
4. Organise a series of activities during maths week that integrate the use of maths into other subject areas and promote the enjoyment of maths. To involve the parents in maths activities.	• Maths trails and integrated activities to be organised • Maths Week: October 16th-24th in conjunction with EU Coding Week October 9th -24th 2020 (10 weeks of coding 4th-6th -DL plan) • Arrange maths for fun activities with parents	Michelle and teachers Michelle/ Alia HSCL	Sept/ Oct 21	Feedback from pupils/ staff/ parents.	[ ]

Differentiated Support 1. Implement *Maths Recovery* Programme with targeted pupils in senior infants and first class. *Term 1: 1 to 1 support* *Term 2 & 3: 1 to 2 support*	Identify & withdraw pupils from 1st class needing Maths recovery	Maths Recovery trained staff	Daily -3 pupils per term who will receive 40 sessions	• Maths Recovery assessment pre and post support for children. • Teacher progress	[ ]
2. Provide Learning Support in the form of withdrawal or in-class for 1st, 2nd, 3rd, 4th,5th, 6th classes and in class support for Junior/senior infants	• Identify those pupils who require additional School support or School Support Plus. • Class Teachers & relevant SEN team to meet regularly to plan programme & teach lessons as a differentiated in-class lessons in 2nd to 6th in strands where appropriate (measures/data etc)	Class/ SEN teachers	Ongoing	• Outcome of Sigma-T • Teacher observation & teacher designed tasks	[ ]
4. Additional SEN teacher to be timetabled for 4th class maths to target pupils affected by COVID 19 closures.	• 1 LS group, 1 smaller maths group and 2 class groups.	class teachers & 2 SEN teachers	Ongoing	• Outcome of Sigma-T • Teacher observation & teacher designed tasks • Staff feedback	[ ]
5. Stream pupils in fifth & sixth class into 3 groups.	• Differentiated programmes to be provided to pupils in fifth/ sixth.	class teacher & SEN staff	Term 1,2,3	• As above	[ ]
6. Accelerate children deemed to be *exceptionally able* at Numeracy	• Pupils to be identified in June. • Reviewed on an annual basis as to capability for acceleration.	Class teachers	June 2021	• As above	[ ]

Monitoring/Review

- Teacher observation is a key tool which will be used in monitoring the progress of this numeracy strategy. Key observations will be noted and discussed at the whole staff level.
- Staff to use cúntas míosúil to note specific activities in relation to all targets
- Discussion at staff meetings - re: feedback and the identification of new strategies and approaches
- CPD will be sought and staff encouraged to attend, to further develop teacher knowledge and skills and to keep abreast of best practice
- Pupil feedback will be sought at regular intervals throughout the year.
- Parental and pupil feedback will be sought through questionnaires, focus groups, information sessions and at parent/teacher meetings
- Standardised Sigma T test will be given at the end of each year and results will be discussed to further develop our 3-year plan.
- Teachers will carry out assessments at the end of topics and record the results in their assessment folder.

Success Criteria/Evaluation

- Overall increase in numeracy scores over the three years
- Problem Solving, Number and Measures scores will improve over the three-year period.
- Teacher observations will be noted and collated
- Class conferencing between teacher and pupils, pupils and pupils to gauge feedback
- Standardised testing at end of each year – data will be analysed over the three years to track performance of pupils' problem solving
- Pupil questionnaires will be analysed to gauge how pupil feedback altered over the three-year period
- Review of children's work samples, maths projects etc.