St. Patrick’s N.S.

Drumshanbo,

Co. Leitrim.

Roll No: 19423J

**Maths**

**Reviewed:** June 2021

**Ratified:**

**Due for Review: 2026**

**Appendix**

**1. Maths Curricular Content (Glance Cards)**

**St. Patrick’s National School**

**Maths Policy**

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| **Introductory Statement and Rationale**  **Introductory Statement**  This Maths plan was originally formulated by the staff of St. Patrick’s National School, Drumshanbo at a series of staff meetings during the school year 2012-2013. This was followed by an SSE process in 2013/14 to improve problem-solving in the school. In the intervening years, the standard of Maths teaching and learning in the school has been of a high standard. This is evidenced in the results in standardised test and was noted in a WSE report from 2015.  The school had a WSE for SEN in February, 2019 and one of the recommendations from the process was to enhance pupils’ learner experiences in numeracy, evidence-based mathematics interventions and initiatives should be implemented by teachers. We had begun discussions on how best to address this when the pandemic caused school closure for the remainder of that school year as well as the disruption of 20/21. However, in the last term of 20/21 we began to discuss and plan for how we might make changes to the ways in which we teach Maths, taking some of the interventions we are doing in English as our model.  This plan was further reviewed in April 2023 after the implementation of Busy At Maths in the senior end of the school and Mata sa Rang in the Junior end.  **Rationale**   * To enure that a core curriculum of objectives are achieved at each class level * To introduce improved teaching methodologies in junior and middle classes in the school * To benefit teaching and learning in our school of Maths throughout the school * To revisit the strategies that were put in place as part of an earlier SSE process * To review the existing plan for mathematics in light of the introduction of a new Maths scheme (Busy at Maths) throughout the school |
| **Vision and Aims**  **Vision**  Our vision in this mathematics plan is to prepare pupils to contribute and play a meaningful role in their communities using and applying mathematical knowledge and skills aquired through the mathematics curriculum.  **Aims**  We endorse the aims of the Primary School Curriculum for mathematics   * To develop a positive attitude towards mathematics and an appreciation of both its practical and its asthetic aspects. * To develop problem solving abilities and a facility for the application of mathematics to everyday life. * To enable the child to use mathematical language efficiently and accurately. * To enable the child to acquire an understanding of mathematical concepts and processes to his/her appropriate level of development and ability. * To enable the child to acquire proficiency in fundamental mathematical skills and in recalling basic number facts. |

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| **Content of Plan**  **Curriculum:**   1. **Strands and Strand Units**  * Teachers are familiar with the curriculum for their class level and the core curriculum for St Patrick’s NS * The Maths curricular content is contained in Appendix 1 which accompanies this policy. (Appendix 1 Maths Curricular Content Glance Cards) * Pupils in the Cairde and Laochra classes will engage with the class curriculum for the standard they are in, where possible; they will integrate in the mainstream class and/get individual support in their own class. Some pupils may have to work on a diffferentiated curriculum appropriate to their needs.   **Approaches and Methodologies**  As part of the new Numeracy Programme we focused on Problem Solving for the 2013-2014 school year. We introduced Team Teaching on a phased basis and have it implemented in all classes. Our 4 Special Education Teachers support the mainstream classes for Numeracy and Literacy. The Team Teaching approach has five elements to it:   1. Word problem 2. Mental Maths (written and oral) 3. Main Content 4. Plenary Session 5. Station Teaching   The aim is to give structure and continuity to each class as they move up the school. We hope this approach will help to reach the targets as outlined in our School Improvement Plan which is attached.  We have introduced Mata sa Rang into 1st and 2nd classes and we hope to further develop this as a methodology for teaching maths.   1. Approaches and A   **2.1 General**   * All children are provided with the opportunity to access the full range (all strands) of the mathematics curriculum. * We aim to ensure that there is less emphasis and reliance on textbooks and workbooks and more on active learning strategies. * The textbooks used in each class are in line with content objectives for the class level. * Appropriate concrete materials are made available and are used at each class level. * Children in fifth and sixth class are provided with an opportunity to use calculators where appropriate for checking answers etc. * We adhere to number limits, particularly at first and second classes where the emphasis is on the development of the concept of place value. * All staff are in agreement that formulae are being ‘discovered’ by children rather than being taught by rote. * There is an emphasis on simple fraction families in the senior classes. * Pupils are provided with opportunities to collect real data in other areas of the curriculum and use it to represent their findings e.g. in science, history and geography. * There is a consensus among the staff in relation to the use of estimation strategies in number. * We aim to raise the profile of mathematics work in the school by making maths fun, using oral maths games, the interactive whiteboard and CD ROM’s.   **2.2 Talk and discussion**  Guided discussion and discussion skills   * Teachers strive to create an environment where talk and discussion in mathematics is taken seriously and seen as an integral part of the learning process, by using teacher/pupil, pupil/pupil, pupil/teacher scenarios for learning. * We provide opportunities for pupils to explain how they got the answer to a problem, discuss alternative ways of approaching a problem and give oral descriptions of group solutions.   Scaffolding   * Teachers actively model the language to be used, particularly when talking through the problem-solving process.     Integration   * We identify areas in other subjects where mathematical processes are appropriate and useful, e.g. gathering data in history and geography, measuring temperatures in science.   Linkage   * We identify opportunities where a thematic approach might be used for linkage, *e.g.* when dealing with decimals are we also aware of their use in data - pie charts; measures - all areas but particularly money for introducing decimals.   Mathematical language in context   * We have an agreed emphasis on the language of mathematics and we created a list for each class level of terminology and language. * Children’s own ideas and environment are also being used as a basis for reinforcing   mathematical language, e.g. you are taller than he is, teacher’s table is longer/wider than yours.   * At our staff meeting we also have identified common approaches to the language used in :-  1. Addition – total, sum of, add, and … 2. Subtraction – minus, subtraction, take-away, difference, less than … 3. Multiplication – times, product of, multiply, groups of … 4. Division – divide, share, split, groups of … 5. Equals – same as, equal   Number facts   * Number facts (tables) are taught from the table book and using the language agreed on and   detailed below.   * Children are aware of the commutative properties of multiplication tables and of their relationship with division. * We teach subtraction and division tables separately or as part of addition and multiplication   initially and then associate them.  **2.3 Active learning and guided discovery**  Agreed strategies for teaching of Maths (language and number operations) are listed below in the core curriculum   * Addition - top to bottom. * Subtraction - use of materials and decomposition (peg boards). * Multiplication - vertical/horizontal presentation, skip counting, using mental strategies such as identifying doubles, near doubles, multiplying by 5 and 10, using games to reinforce facts, developing and honing estimation skills. * Division - concept of sharing, understanding division as repeated subtraction, developing and honing estimation skills.   The children are encouraged to develop personal benchmarks, particularly in the measures strand, e.g. noting their height in relation to a metre, the width of their finger as close to a centimetre.  We use mathematical games at each level, *e.g*. dice, cards, dominoes, are they being used to support particular areas of mathematics.  **2.4 Collaborative and Co-Operative learning**   * In order to ensure that the children learn the skills necessary to work *as* a group rather then just in a group we employ as variety of strategies. These form an integral part of the S.P.H.E., S.E.S.E, curriculum and are employed in all subject areas. There is an emphasis on turn-taking and appreciating others’ opinions. * Each class uses a variety of organizational styles. These comprise of pair work, group work, individual work, class work and also a variety of seating arrangements are employed in this and all subjects.   **2.5 Problem Solving**   * Children are encouraged on a regular basis to use their own ideas as a context for problem solving. An example of this is - *“ Mammy bought a 2 litre bottle of orange for the party yesterday – was it cheaper than two 1 litre bottles? . ”* etc. * We are providing opportunities for all children from Infants to Sixth Class and including those in our Special Needs class to experience problem-solving activities by * Giving oral problems * Having them use objects to solve problems * By using smaller numbers * By using items in the environment (pencils, books, footballs etc.) * There is an agreed emphasis on the language of mathematics, for each class level there is a list of terminology and language appropriate for that class level. * There is a conscious effort made to use the children’s own ideas and environment as a basis for reinforcing mathematical language, e.g. you are taller than he is, teacher’s table is longer/wider than yours.   **2.6 Using the environment**  The following elements of the environment are being used in our school mathematical  programme: classroom, school building, yard, car-park, field, locality.  **2.7 Skills through content**   * Teachers ensure that skills are being actively developed through the content of maths classes. The transfer of these skills are used in other areas   + Applying and problem solving   + Communicating and expressing   + Integrating and connecting   + Reasoning   + Implementing   + Understanding and recalling   The use of mental mathematics is encouraged in all classes.  **2.8 Presentation of work**   * There is an agreed approach to numeral formation in the junior classes. * There is a whole-school approach to presentation of written work. * We provide a variety of options for recording work, *e.g.* drawing a picture to show the result; using ICT; using concrete materials to demonstrate how the result was obtained; using a diagram; telling/explaining.   **3. Assessment and Record Keeping**   1. *Assessment and*   In Mathematics in St Patrick’s N.S. all teachers assess and keep records of all children’s work on an ongoing basis through:  o Teacher observation  o Assessment Tests issued termly as part of our maths scheme  o Teacher-designed tests and tasks  o Work samples  o Standardised tests  o Diagnostic tests (mainly resource/learning-support)   * Assessment is used to direct teaching and learning in our school. * Teacher’s record test results in child’s report and pass on to next class teacher, teachers consult previous class teachers of pupils if they have any concerns; teachers use the same mathematical language.   In Junior and Senior Infants the class teachers use informal testing method on a regular basis.  (Formal tests are not used at this stage).  From 1st to 6th class standardised tests are given in the summer term of each class, with the exception of 1st class, who also are tested in the autumn term.  Busy At Maths assessment booklets are given four times a year in these classes also.  In 2nd Class children are tested on addition and subtraction facts/tables.  From 3rd Class, children are tested on multiplication and division facts/tables   * When the standardised tests are being administered each teacher has a copy of the teacher guidelines for administering the test and the teacher follows the instructions in accordance with the manual. The Special Education Teacher (SET) ensures that everyone has enough copies of the test and a manual. * The results of the standardised tests are inputted into one computer by the class teacher using the appropriate software. A copy of the results is printed off and kept by the class teacher. These results are then passed to the next teacher as the children move through the school. The results of the most recent results are communicated to the parents through the end of year school report. They receive the sTen score of the test. At the annual parent teacher meeting, the most recent results are communicated and results can be further discussed if necessary. * If an individual teacher has any concerns about any student, the teacher will contact the child’s parents immediately. If the teacher thinks that a child needs further support in relation to sten scores etc, extra support can be organised with the SET, in consultation with parents. * If it is a class based piece of work, the teacher discusses it with the child individually as appropriate. The Mathemagic assessment test results are communicated individually to each child. Strengths and weaknesses discussed as necessary. * The standardised test results are stored on a computer that each teacher has access to. At the end of each year, the most recent results are passed to the next class teacher. The most recent Busy At Maths test booklets are also passed to the next teacher in the child’s file. * There is a whole school agreement on the terminology used in record sheets in relation to Sigma-T tests and Busy At Maths assessment tests.   The records are managed and stored in line with the school’s policy on record keeping. They are kept for one year after the child leaves the class in the child’s file. Each year as the file is updated the previous class test booklets are shreded. When the child leaves the school in 6th class, all 6th class standardised tests and assessment tests are kept in the child’s file.   1. *Children with Different*   **Children with Different Needs**  **4.1 Children with Learning Difficulties**  Strategies for Inclusion  To ensure full participation in relation to the Mathematics Curriculum teachers use a range of strategies throughout their maths lessons.   * Peer support: This is where the teacher may position the child with learning difficulties beside a peer of equal or greater ability. This strategy can provide a secure environment for the child to perform the maths’ tasks at a pace that is suitable with the help of a peer for guidance and support. * Differentiated tasks: Where the teacher sees fit, the child with learning difficulties will have different work provided so as to maintain progress, but at a level that best suits the child. * Provide suitable resources: Where a child may benefit from concrete materials (e.g. counters for addition) the teacher will make readily available these resources, along with instructions or demonstrations on their use. * Directed questioning: The teacher may direct level appropriate questions to the child with learning difficulties to ascertain the level at which the child is at and also determine the level of understanding the child possesses in relation to the given topic. * One-to-one tuition: Where time allows, the teacher can provide the opportunity for one to one questioning and tuition to the child with learning difficulties in relation to a specific topic. * Provide opportunity for the child to attend the SET and liaise with the teacher with regards the immediate needs of the child in relation to maths.   **Access to all Strands**  Children with learning difficulties are provided with access to all strands of the Maths curriculum through the appropriate planning and use of resources and learning aides, in consultation with fellow teachers and with the SET.  **Differentiated programmes for children with different needs**  Where required a differentiated programme is implemented for a child with special needs with regards to the Maths Curriculum. This can be done as a result of Standardised Test results, formative assessment carried out by the teacher over the course of the year or as a result of concerns arising from past teachers as to the ability and needs of the child. Student Support Plans (SSP) are also constructed in consultation with the SET, usually at the start of the year, with periodical reviews throughout the school year. (*See Learning Support Policy).*  **Supplementary Teaching**  As stated above, supplementary teaching is provided for the child with learning difficulties, where this is deemed appropriate. The SET along with the class teacher and previous class teacher will discuss the options available in relation to the needs of the child and devise a programme tailored to those needs. Where a child leaves the classroom to receive support in the area of Maths, every effort is made to reduce the impact of missed lessons or time in the class room. Usually a programme/timetable is devised to run alongside the class maths slots so that the child ends up doing maths at the same time as the class.  By meeting on a regular basis (at least once a term) and discussing and monitoring the progress of the child with special needs, the SSP remains tailored to the specific needs of the child and is open to change and adaptation where necessary. All test results are recorded and shared between the teachers  **4.2 Children with exceptional ability**  St. Patrick’s N.S. recognises that children with exceptional ability fall under the umbrella of Children with different needs. As is the case with children with learning difficulties, teachers cater for the needs of exceptionally gifted children in consultation with the Learning Support teacher and in their individual planning.  **Strategies for Inclusion**   * Peer support: In the case of an exceptionally gifted child opportunities may be created for the child to act as peer support for other children in the class. This strategy can provide a platform for confidence building and positive role modelling. * Differentiated tasks: Where the teacher sees fit, the child with exceptional ability will have different work provided so as to provide extension and to maintain progress, but at a level that best suits the child and not the whole class. * Provide suitable resources: Where a child may benefit from extra materials (e.g. number puzzles, computer programmes etc.) the teacher will make readily available these resources, along with instructions or demonstrations on their use. * Directed questioning: The teacher may direct level appropriate questions to the child with exceptional ability to ascertain the level at which the child is at and also determine the level of understanding the child possesses in relation to the given topic, so as to inform future planning. * One-to-one tuition: Where time allows, the teacher can provide the opportunity for one to one questioning and tuition to the child with exceptional ability in relation to a specific topic. * Provide opportunity for the child work independently and to work from textbooks, worksheets that match where the child is at and not the whole class.   **Differentiated programmes for children with exceptional ability**  Where required a differentiated programme is implemented for a child with exceptional ability with regards to the Maths Curriculum. This can be done as a result of Standardised Test results, formative assessment carried out by the teacher over the course of the year or as a result of concerns arising from parents and past teachers as to the ability and needs of the child. Group/pair work can support a number of children who may be exceptionally gifted as we provide them with opportunities to work together on differentiated maths.  **Liaising with parents**  As with any child deemed to have different needs in the school, meetings are organised with parents and teachers in an effort to devise the most suitable plan of action for the child. As well as Parent/teacher meetings, parents are encouraged to meet with the teacher in relation to concerns of the child’s progress.  **5. Equality of Participation and Access**   1. *Equality of Participati*   St. Patrick’s N.S. ensures that full equality of participation and access is provided for in the implementation of the mathematics Curriculum. The school ensures that equal opportunities exist throughout the school in the relation to gender and the mathematics curriculum. Equal opportunities are given to boys and girls to participate in discussion, the use of manipulatives, in presentations and in the use of mathematical resources. All children (including children with learning difficulties and children of exceptional ability) have access to services, facilities and amenities in the school environment.  **6. Timetable**   1. *Timetable*   Each mainstream teacher in the school teaches mathematics each day according to the time allocated in the Primary school curriculum pg 67-70. Where SETs group teach for maths, and pupils leave the classroom to attend supplementary mathematics teaching, teachers include these pupils for as much of the mainstream mathematics programme as possible. Groups are rotated so that they have a combination of their class teacher and SET teacher. The learning support teaching timetables are drawn up in such a way that no pupil will miss out on all of their mainstream mathematics classes.   1. *Homew*   **7. Homework**  Mathematics homework is given by each teacher in accordance with the school’s homework policy.  The homework may include active learning approaches (e.g. gathering information), textbook work, and mental arithmetic (e.g. tables).   1. *Resources and ICT:*   **8. Resources and ICT**  Equipment, textbooks, supplementary materials, calculators   * Mathematics resources / materials are distributed among the classrooms. * Each teacher is familiar with the equipment he/she needs. * If a teacher needs some specific equipment that he/she doesn’t have in her classroom the inventory can be consulted to find out which classroom it is in. * Each teacher is responsible for selecting materials, equipment, games, textbooks, supplementary books he/she may need. * 5th and 6th class are permitted to use calculators. Teachers familiarise themselves accordingly with the curriculum guidelines on their use. * The SET uses a wide range of concrete materials and ICT for teaching mathematics. Refer to Inventory for a list.   ICT   * Each class has mathematics software geared at teaching that particular level of mathematics. Online resources are accessed using the Busy At Maths scheme when needed. * Staff are also permitted to research and purchase software if they consider it suitable for their specific classrooms. * There is a code of practice to ensure safe internet usage, appropriate hardware and software has been installed. * The school doesn’t use e-mail or video conferencing to make contact with other schools. * However, all children have school accounts to access learning; SeeSaw in the Junior classes and Google Classroom in the Senior Classes. They use a blended learning and some homework is given using these platforms. * We have a suite of i-pads and appropriate apps are available to children on these for maths. They are used in station teaching and for smaller group work.  1. *Individual Teachers’*   **9. Individual Teachers’ Planning and Reporting**  Each teacher consults their curriculum documents for Mathematics and the whole school plan for Mathematics when preparing their individual long term and short term plans for Mathematics.  At the end of each month each teacher completes a cuntas miosuil where all mathematics taught  to the children is recorded*.*  Individual teachers can consult their cuntas miosuils and from this they can see areas of Mathematics that may warrant further attention. Any necessary changes can be made to individual preparation such as pacing of work, changes in teaching methods etc. Any necessary changes can be made to the school plan to support these changes.   1. *Staff Development:*   **10. Staff Development**  Teachers have access to current research, reference books, resource materials and websites.  Each teacher takes responsibility for monitoring developments and sourcing/obtaining materials.  Staff meetings provide opportunities to facilitate the sharing of this information.  Teachers are made aware of and encouraged to attend courses. Teachers share the skills/expertise acquired at these courses through informal discussion and the staff noticeboard. Time is allocated at staff meetings to discuss issues related to the mathematics programme. Time is also allocated to allow for collaboration between SET and staff for team teaching and for Mata sa Rang so planning is consistent.   1. *Parental Involvem*   **11. Parental Involvement – Home School Links**  Communication between teachers and parents about the content of the mathematics programme and the methods being used is important. Parents can help their children informally by encouraging the correct use of mathematical language and the use of number, estimations and mental strategies in everyday life.  Homework will be used to create a link between home and school. It is important to communicate with parents about the correct terminology and methods being used by the children.  Individual teachers will send home a note on the methodologies used and also on the appropriate maths language to be used. |
| **Success Criteria**  We will know that the plan has been implemented if :-   * Teachers’ preparation is based on this plan * Procedures outlined in this plan are consistently followed     We will know that the plan has achieved its aims from:-   * Feedback from teachers/parents/pupils/community * Inspectors’ suggestions/report * Feedback from second level schools * Cuntas Míosúil |
| **Implementation**  **Roles and Responsibilities**:  The plan will be supported, developed and implemented by the principal and staff of the school.  The plan will be monitored and evaluated as necessary at whole staff meetings.  **Timeframe:**  The school will implement any changes as deemed necessary and other changes as appropriate in the school year 2024/2025 |
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