

S.N. Cillín Liath, Maistir Gaoithe, Cill Áirne, Co. Chiarraí

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**Plean do Mhatamaitic**

**1. Introductory Statement and Rationale**

**(a) Introductory Statement**

This whole school plan in Mathematics was prepared and reviewed by the staff of S.N. Cillín Liath during the academic year 2015/2016 and will be implemented in December 2016. In preparing the plan, members of the Board of Management were consulted.

It was ratified by the Board of Management in December 2016.

**(b) Rationale**

This plan was designed in order to:

* Review, consolidate, clarify and build upon aspects of existing mathematics plans.
* Organise and co-ordinate work being carried out already by staff in mathematics.
* Establish and provide a resource for staff members.
* Provide a framework within which more specific planning can take place.
* Provide information for Teachers, Parents, B.O.M Members and all other interested educational partners of the school community.
* **Vision and Aims**
* **(a) Vision**: In conjunction with our school’s vision statement, and school aims, it is our intention to help each child develop to his/her full potential. We present our pupils with a carefully planned and coordinated curriculum that ensures sufficient opportunity for each student to acquire essential knowledge and skills, takes account of individual needs and meets the requirements of the Primary Curriculum. It is our aim that when a child leaves sixth class he/she will be able to recall basic number facts, think logically, solve problems, interpret data and have the required mathematical skills to enable them to reach their full potential.
* **(b) Aims**
* To develop a positive attitude towards mathematics and an appreciation of both its practical and its aesthetic 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 effectively 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.
* **(c) Objectives**
* We endorse the objectives of the Primary School Maths Curriculum as detailed on pages 12 – 14 of the Curriculum document.
* **(d) Content of Plan Curriculum:**

|  |
| --- |
| **Infant Classes** |
| Strands  | Strand units  |
| Early mathematical activities  | ClassifyingMatchingComparing* Ordering
 |
| Number  | * Counting

Comparing and orderingAnalysis of numberCombiningPartitioningNumeration |
| Algebra  | Extending patterns |
| Shape and space  | Spatial awareness* 3-D shapes
* 2-D shapes
 |
| Measures  | * Length
* Weight
* Capacity
* Time

Money |
| Data  | Recognising and interpreting data |
| **First and Second Classes:** |
| Strands  | Strand units  |
| Number  | Counting and numeration* Comparing and ordering
* Place value
* Operations-Addition, Subtraction
* Fractions
 |
| Algebra  | Extending and using patterns |
| Shape and space   | * Spatial awareness
* 2-D shapes
* 3-D shapes
* Symmetry
* Angles
 |
| Measures  | * Length
* Area
* Weight

Capacity* Time
* Money
 |
| Data  | Representing and interpreting data |
| **Third and Fourth Classes** |
| Strands  | Strand units |
| Number  | * Place value

Operations  Addition, Subtraction, Multiplication, Division* Fractions
* Decimals
 |
| Algebra  | * Number patterns and sequences
* Number sentences
 |
| Shape and space  | * 2-D shapes
* 3-D shapes
* Symmetry
* Lines and angles
 |
| Measures  | Length* Area
* Weight

Capacity* Time
* Money
 |
| Data  | * Representing and interpreting data
* Chance
 |
| **Fifth and Sixth Classes** |
| Strands  | Strand units |
| Number  | * Place value
* Operations
* Fractions

Decimals and percentages* Number theory
 |
| Algebra  | * Directed numbers
* Rules and properties
* Variables

Equations |
| Shape and space  | * 2-D shapes
* 3-D shapes
* Lines and angles
 |
| Measures  | * Length
* Area
* Weight
* Capacity
* Time
* Money
 |
| Data  | Representing and interpreting data |
|  | Chance |

**2. Approaches andMethodologies:**

**2.1 General**

All children should be provided with the opportunity to access the full range of the Mathematics Curriculum. In our school we ensure this happens as follows:

* There is more emphasis on active learning strategies and less emphasis and reliance on appropriate textbooks and workbooks which are used as a support
* There is a hands-on approach to encourage children to understand Mathematical concepts using concrete materials/everyday objects which are available in their immediate local environment
* We provide the opportunity for the use of calculators in relevant learning situations from fourth to sixth class.
* Pupils engage in estimation strategies through every appropriate strand within the Mathematics curriculum for example Shape and space/Number/Measures
* Teachers ensure that the relevant mathematical language is implemented appropriately and in context formally through Maths instruction and informally across the curriculum
* Children are exposed to a Maths rich environment both within the classroom and in the wider school environment
* All teachers integrate mathematical skills across all areas of the curriculum for example through the use of data collection in such areas as Science, History, Geography etc
* **2.2 Talk and Discussion**
* **Discussion skills**
* Talk and discussion in Maths is an integral part of the learning process
* Discussion skills are enhanced by: turn-taking, active listening, positive response  to the opinions of others, confidence in putting forward an opinion, ability to explain clearly their point of view.

**Scaffolding**

* Teacher actively models mathematical language when talking through the problem-solving process.

**Integration**

* A thematic approach will be used for linkage within mathematics and integration across all areas of the curriculum for example measuring volumes of liquids in Science, collecting Data in S.E.S.E.

**Teanga - Coincheapa/ Scileanna**

Tá nasc láidir idir teanga agus sealbhú coincheapa. Tá sé an tabhachtach, dar linn, go mbaintear úsáid as na téarmaí céanna agus go mbaintear an úsáid cheart as na hainmneacha do na siombail. D’aontaíomar maidir leis na téarmaí seo a leana

**Foclóir**

**Suimiú agus Coibhéis**

Úsáidtear na siombailí + agus = don chéad uair sna Naíonáin Shinsireacha. Roimhe sin, (i.e. Naíonaín Shóisearacha), bainfear úsáid as na bhfóclóir seo a leanas chun labhairt faoi na suimeanna

* +: **suimigh, suimiú, móide, agus, le chéile, níos mó…**
* =: **cothrom le, is é, sin a.**

Ó rang a haon ar aghaidh, rachaidh na leanaí i dtaithí ar na téarmaí seo a leanas:

* +: **suimigh, suimiú, móide, agus, iomlán, méadú, le chéile, níos mó ná…**
* =: **cothrom le, léiríonn sé**

Dealú

Úsáidtear an tsiombail “–“ don chéad uair i rang a haon. Sna ranganna naíonáin bainfear úsáid as na téarmaí seo a leanas:

* **tóg, tógtha ó, níos lú ná, fágtha**

Ó rang a dó ar aghaidh, rachaidh na leanaí I dtaithí ar na téarmaí seo a leanas:

* **dealú, laghdú, dealaigh, rud a thógáil ó, óna, níos lú ná, lúide, difríocht**

**Iolrú agus Roinnt**

Úsáidtear na siombailí x agus ÷ don chéad uair i Rang a Trí. Bainfear úsáid as na téarmaí seo a leanas:

* x: **iolrú, iolraigh, méadaigh, uair, de**
* ÷: **roinnt, rud a roinnt, roinnte ar, deighilte, roinnte, roinnte idir, grúpa, cé mhéad \_\_\_ i \_\_\_.**

I Rang a 5 agus i Rang a 6, áireofar na focail **toradh** agus **sainuimhir.**

* Short Multiplication: Teachers will always start at the bottom. The ‘carries’ will always be placed on the line.
* Long Multiplication: Teachers will start at the bottom. ‘Carries’ will be kept on the first line and will be written small and close to their relevant number.
* Division: In short division algorithms the line will be written on both the top and the bottom. Remainders will be written small and to the right of their relevant number

**Ionadluach**

In ionadluach, bainfear úsáid as an bhfocal **aonaid** in áit **aonta**.

Modhanna Scríofa

Chun a chinntiú go mbainfear úsáid as cur chuige uile scoile maidir le dealú agus codáin, d’aontaíomar ar na nithe seo a leanas:

Ingearach: Tósú ón mbarr ag baint úsáid as na focail

Cothrománach: Léamh ó chlé go deis ag baint úsáide as na focail **a thógáil ó**

* Bainfear úsáid as na modh athainmnithe/ athghrúpála ar fud na scoile.
* **Codáin**
* Maidir le suimiú agus dealú **uimhreacha measctha**, oibrítear ar na **slánuimhreacha** ar dtús agus ansin baintear úsáid as coibhéis don chuid chodánach trí theacht ar an g**comhainmneoir**.
* 5 ¼ + 3 ½ = 8 ¼ + 2/4
* Úsáidtear leaschódáin in iolrú agus roinnt
* 3 ½ x 2 2/3 = 7/2 x 8/3
* Bíonn deis ag leanaí labhairt faoi na gníomhaíochtaí sin agus ábhair concréideacha a úsáid le hiad a léiriú sula scríobhann siad síos na siombaillí .
* The decimal point: The decimal point will always go centre way and not at the bottom.
* **Táblaí**
* Foghlaimeofar fíricí uimhreacha suas go dtí uimhir a deich de ghlanmheabhair. Beidh na fíricí a bhaineann le suimiú de ghlanmheabhair ag na leanaí faoi dheireadh Rang a 2 agus na fíricí a bhaineann le hiolrú de ghlanmheabhair acu faoi Rang a 4. Déanfar athbhreithniú ar na táblaí uile go dtí deireadh Rang a 6.
* Foghlaimeofar na táblaí dealaithe agus roinnte mar chontárthach na dtáblaí suimithe agus iolraithe.
* Bainfear úsáid as modhanna éagsúla, ina measc, comhaireamh I ndónna, tríonna, ceathaireanna…, rudaí a ra amach, dlúthdhioscaí ceoil a úsáid srl.
* **2.4 Collaborative and co-operative learning**
* The school has adopted a policy of giving children opportunities to engage in collaborative and co-operative learning (for example paired work, group work, whole class learning ad station teaching) in order to learn skills such as listening, turn-taking, appreciating the opinions and views of others.

**2.5 Problem-solving**

* Practical situations will be used as a basis for some problem solving.
* Children will be made aware of different strategies to solve problems, eg: acronyms, mnemonics, bookmarks, laminated pages.
* The solutions to problem solving questions could be checked by children themselves or by calculator.
* Children at all class levels will be provided with opportunities to experience problem solving activities. Eg: oral problems, using objects, using smaller numbers, referring to items in the environment.
* **2.6 Using the Environment**
* The teachers use the school environment to provide opportunities for Mathematical problem solving e.g. maths in P.E.
* Integration allows for opportunities to use the school environment for
* Measuring
* Recording
* Graphs
* Surveys
* The school is keenly aware of and involved in environmental issues, for example the Green School project. For this reason every effort will be made to use the environment in the teaching of Maths. Mathematical work and concepts are displayed in the school, for example maths display board in the classrooms .
* **2.7 Skills through Content**
* Applying and problem-solving
* Understanding and recalling
* Communicating and expressing
* Integrating and connecting
* Reasoning
* mplementing
* Estimation
* **2.8 Presentation of Work**
* There is an agreed approach to numeral formation in the junior classes.
* There will be a whole school approach to neat and careful presentation of work.
* A variety of opportunities will be provided for recording work e.g. using ICT to record data, concrete materials for junior classes and using diagrams.
* **3. Assessment and Record Keeping:**
* Assessment is an integral part of our teaching and learning of Maths. The following assessment methods are used:
* Teacher Observation
* Teacher designed tests and tasks
* Projects and work samples
* Diagnostic testing
* Standardised testing- Sigma T will be administered in May each year in classes 1st to 6th.  The results are recorded using the CD-Rom and results are recorded and stored in the locked filing cabinet in the secretary’s office. In September, the new class teacher will discuss these results with the class teacher who administered the test.
* Assessment information /results on standardised tests are shared with parents through the child’s report card in June and at the annual Parent Teacher Meetings.

**4. Children with Different Needs:**

* Children with special needs have access to all strands of the mathematics curriculum.
* Teachers will tailor the Mathematics curriculum to make it accessible to all children.
* Differentiation is used at every class level within the class.
* The Learning Support Teacher provides supplementary teaching in Maths for children identified with difficulties. The availability of supplementary teaching for maths depends on the case-load  of the learning support teacher.
* The Learning Support Teacher has access to and makes use of many resources to assist children with special  needs.
* ICT is used regularly to support teaching and learning for children with special needs.
* 4.2 Children with exceptional ability  The school will provide a range of strategies to provide challenges for children of exceptional ability such as
* Differentiated mathematics programme
* The use of ICT to support their work
* Opportunities to work with other children.

**5. Equality of Participation and Access:**

* All children will have access to the Maths programme irrespective of background or ability.
* All children have access to services, facilities, or amenities in the school environment.
* **Organisation:**
* 6. Timetable: A minimum of 3 hours and 25 minutes each week is allocated for the formal teaching of mathematics in infant classes and 4 hours 10 minutes in classes 1st to 6th as outlined in the Introduction to the Primary School Curriculum.
* **7. Homework**
* Mathematics homework should reflect an active learning approach
* Maths homework will be achievable and therefore be differentiated according to the child’s  need as appropriate.
* Class teacher and resource/ learning support teacher will decide if child does class  homework or differentiated programme.

**8. Resources and ICT**

* Appropriate maths equipment is stored in the classrooms which corresponds to the maths curriculum of that class level.
* An inventory of all resources is displayed in the staffroom.
* Each class has supplementary resources such as posters that correspond to their maths  programme.
* **ICT**
* The internet is used by teachers regularly and useful websites are listed in the staff- room where staff can list new websites that have age appropriate activities.
* The school has an internet usage policy which is adhered to by pupils and teachers alike.

**9. Individual Teachers’ Planning and Reporting**

* This school plan and the Curriculum documents for mathematics will provide information and guidance to individual teachers for their long and short term planning.
* A record of what has been taught can be found in the central cuntas míosúil document which is submitted to the Principal.
* **10. Staff Development**
* Teachers are made aware of opportunities for further professional development through participation in courses.

**11. Parental Involvement - Home School Links**

* In our school we encourage and welcome the involvement of parents in their children’s education. Such partnership is exemplified in
* Annual parent/teacher meetings which allow for a discussion of individual children’s progress in Maths will be organized.
* Informal parent teacher meetings will be convened at the request of the teacher or parent in order to discuss concerns about a child’s progress in Maths.
* **12. Community Links**
* Members of the local community may be invited to assist the school maths programme.
* **Implementation**
* (a) Roles and Responsibilities: The plan will be monitored by all members of staff under the guidance of the Principal & Board of Management.
* (b) Timeframe: The first review will take place at the May 2017 staff meeting.

**Ratification and Communication**

This plan was ratified by the Board of Management on

Each teacher received a copy for their school plan folder.