



**Primary Curriculum
Support Programme**
foghlaim agus forbairt



**School Development
Planning Support**

**Curriculum Planning
Whole School Plan for**
Numeracy
Mathematics

Planning: Mathematics

■ Title

Policy on Mathematics and numeracy for Talbot Senior National School

■ Introductory Statement and Rationale

(a) Introductory Statement

This plan has been formulated on an ongoing basis since October 2003 by the staff of Talbot S.N.S. at inservice days and staff meetings. Updates have been added by the postholder. The latest review was February 2012 following work by the post holder, consultation with the Numeracy Committee and the staff as a whole.

(b) Rationale

We have reviewed this plan:

- To benefit teaching and learning in our school.
- To guide teachers in planning.
- To conform to the principles of learning outlined in the primary curriculum.
- To update our existing plan and implement WSE recommendations
- To assist all staff with the teaching of maths.

■ Vision and Aims

(a) Vision:

In keeping with the ethos of our school, we seek to give our students the opportunities to develop to their true potential in mathematics.

We aim to make mathematics practical, beneficial, relevant and enjoyable in their lives.

(b) Aims:

1. To develop a positive attitude towards mathematics and an appreciation of both its practical and its aesthetic aspects.
2. To develop problem-solving abilities and a facility for the application of mathematics to everyday life.
3. To enable the child to use mathematical language effectively and accurately.
4. To enable the child to acquire an understanding of mathematical concepts and processes to his/her appropriate level of development and ability.
5. To enable the child to acquire proficiency in fundamental mathematical skills and in recalling basic number facts.

■ Content of Plan

Curriculum:

1. Strands and Strand Units:

STRANDS	THIRD/FOURTH	FIFTH/SIXTH
NUMBER	<ul style="list-style-type: none">• Place value• Operations• Addition and subtraction• Multiplication• Division• Fractions• Decimals	<ul style="list-style-type: none">• Place value• Operations• Addition and subtraction• Multiplication• Division• Fractions• Decimals and percentages• Number theory
ALGEBRA	<ul style="list-style-type: none">• Number patterns and sequences• Number sentences	<ul style="list-style-type: none">• Directed numbers• Rules and properties• Variables• Equations
SHAPE AND SPACE	<ul style="list-style-type: none">• 2-D shapes• 3-D shapes• Symmetry• Lines and angles	<ul style="list-style-type: none">• 2-D shapes• 3-D shapes• Symmetry• Lines and angles
MEASURES	<ul style="list-style-type: none">• Length• Area• Weight• Capacity• Time• Money	<ul style="list-style-type: none">• Length• Area• Weight• Capacity• Time• Money
DATA	<ul style="list-style-type: none">• Representing and interpreting data• Chance	<ul style="list-style-type: none">• Representing and interpreting data• Chance

SKILLS THROUGH CONTENT:

- Applying and problem-solving
- Communicating and expressing
- Integrating and connecting
- Reasoning
- Implementing
- Understanding and recalling

2. *Approaches and Methodologies:*

METHODOLOGIES

The following approaches and methodologies may be used in the school:

Talk and discussion	Correct use of language	Puzzles
Hands-on approach	Turn-taking	Games
Problem-solving	Active listening	Projects
Putting opinions forward	Mathematical trails	Estimation
Maths in the environment	Word problems	Practical tasks
Calculators	ICT	Maths activities
Active learning	Integration	Linkage
Mental maths	Collaborative learning	Skills through content
Mathletics	Maths 4 fun	I-pads

PRESENTATION OF WORK

Neat, clear presentation of maths work in copies is expected. (eg one digit per box)

Work is done in pencil.

Use of margins, columns, rough work columns, dates and page numbers is encouraged.

MATHEMATICAL LANGUAGE

Teachers actively model language used in a topic.

The correct use of mathematical language/terminology is encouraged within the school.

All mainstream classes use a common textbook “Mathemagic”.

Teachers are expected to use oral and written forms of the common language found in the teaching of the curriculum.

Living charts of mathematical language are encouraged.

Children during their school career should be exposed to different terms in relation to symbols such as:

+	–	x	÷
Add	subtract	multiply	divide
Plus	minus	times	share (equally)
Sum	take away	groups of	group
Total	difference between	by	divide into
Altogether	taken from	product	divisible by
And	less than	sets of	split equally
Count on	count back	times table	
Increase	decrease/reduce		
More than	fewer		
	reduce		

TABLES

Children learn their tables by rote from third to sixth class.

At the start of third class they will learn multiplication tables as follows: $1 \times 3 = 3$ etc.

Tables in 3rd class should be taught in groups eg 2,4,8 or 3,6,9 and 5,10.

From the end of third class children will use a variety of ways to say tables in order to make them aware of the commutative properties of the tables.

AGREED STRATEGIES

Addition:

In third class adding a column of numbers will be done from the top down, and this will be followed by using a variety of methods. In general, “carry” numbers should be smaller than the numbers in the sum. “Carry numbers” should be written on the line and not at the top of the sum.

Subtraction:

Say the top number and take the bottom number from it.

Long multiplication:

Adding fractions:

1. Common denominator
2. Body of sum
3. Add whole numbers
4. Combine two answers at the end.

Alternative method:

Subtracting fractions:

1. Common denominator
2. Body of sum
3. Subtract whole numbers
4. Combine two answers at the end.

Alternative method

3. *Assessment and Record Keeping:*

Assessment for Learning:

AfL usually takes place in the day-to-day minute-by-minute interactions between teachers and children. Everything children do, say and make has the potential of providing the teacher and the children themselves with information about what they do and don't understand and what they can and cannot do. AfL includes observation, monitoring of oral work, group work, one-to-one, written work and class discussion.

Assessment of Learning:

AoL generally involves assessing a child's learning at the end of a given period, such as the end of a unit of work, a week, a term or a year. The emphasis in AoL is on measuring a child's cumulative progress towards curriculum objectives.

Some teachers use pre-testing before the teaching of a topic.

Teachers produce their own ongoing in-house assessment tests for when a topic has been finished and record results.

Some teachers use commercial end-of-topic or revision tests eg Fallons

Test results should be used by teachers for their subsequent planning and teaching.

Children's copies and homework are a record of work done throughout the year.

Annual testing of all pupils is carried out in May/June using the Drumcondra standardised test of Sigma-T. This testing is coordinated by the deputy principal. The results are used when planning learning support for the following academic year. They are also used by mainstream teachers in their planning.

Summer reports are filled in for maths by teachers.

Standardised results from the end of year tests are given to parents at the following school year's parent-teacher meetings.

4. *Children with Different Needs:*

In keeping with the ethos of our school, each individual is helped to develop to his/her potential. This will be achieved by teachers varying the pace, content and methodologies to try to ensure learning and success for all children.

Learning support teachers go into the mainstream classes to work with mainstream teachers and groups.

Necessary differentiation is expected to occur within mainstream classes.

Teachers will aim to cover the curriculum at the level of the students they teach.

5. *Equality of Participation and Access:*

All the children in our school participate in maths and are given equal opportunities in class. Where required and feasible, language will be simplified and/or concrete materials used to assist children.

Physical layout of a room should accommodate children with physical disabilities.

Organisation:

6. *Timetable:*

In accordance with Circular 0056/2011, 250 minutes should be spent weekly on maths.

From September 2012, the maths timetable is as follows:

3rd/4th : 9.00 – 9.50am.

5th/6th: 9.55 -10.45am.

Some learning support groups take place during these times.

Learning support teachers work within the mainstream class during maths time so co-teaching can take place. This is an approach to teaching where two or more teachers share teaching responsibilities in a classroom situation. There are different models and more than one model may be used within one class period. Both teachers interact with the children at different times.

Models used may include:

- One Teach, One Assist
- Alternative Teaching.
- Parallel Teaching.
- Station Teaching.
- Team Teaching.
- Differentiated Class Divide.

7. Homework:

School policy is currently to give homework only in areas which have been covered during school by the teacher ie reinforcement of class work.

Homework may include written exercises, practical work or learning of tables.

In total, homework ranges from approximately 20 minutes in third class to 40 minutes in sixth class.

Homework is taken down in the school journal. It is signed by the parent/guardian who also writes down duration of homework.

Children are encouraged to do a little Mathletics each evening.

8. Resources and ICT

ICT

Each mainstream teacher has an interactive whiteboard which may be used to support the maths curriculum.

ICT maths resources are provided for teachers on the school website.

Maths programmes are provided in the computer room which is available to all mainstream classes on a timetabled basis.

Each pupil is registered for Mathletics. This is done weekly during class computer time and pupils are also encouraged to participate at home. Achievements in Mathletics are acknowledged and rewarded in school. Mathletics after-school clubs operate for children who do not have internet access at home.

I-Pads are timetabled for weekly use by each class.

Textbook

The textbooks currently in use in mainstream classes is “Mathemagic” and” New Wave Mental Math”. It is also used by some teachers in learning support.

Extra maths texts in use include “Busy at Maths”, “Figure it Out”, “Maths Challenge”, “Test Times”, “Action Maths”, “Maths Matters”, “Maths Mate”, “Sum Detective”

Children throughout the school may use tables books and hundred squares where needed. A maths folder of ideas and resources is available in the staffroom and on the school network.

Calculators:

It was decided to purchase the Sharp Elsimate ES 240S model. 126 calculators are stored in boxes in the strong room for use by mainstream classes.

A box of calculators is also stored in the learning support area for use by learning support classes.

Equipment:

The post-holder has responsibility for maths equipment. Purchases are made following consultation with all teachers and the principal on a regular basis.

All maths equipment is distributed throughout the school during the month of September by the post-holder. Equipment remains in a designated classroom for the school year. A detailed list of the location of all equipment is given to every teacher. Equipment may be used and then returned to its original location.

At the end of each school year, equipment is collected by the post-holder who does an inventory and organises replacing/purchasing/updating for the following year.

9. Individual Teachers' Planning and Reporting:

Annual planning by teachers covers all strands and strand units. Termly planning comes from this. Each teacher then plans fortnightly for maths.

AfL and AoL should be reflected in teachers' planning

Newly qualified teachers in their Diploma year may be requested to plan differently by their inspector.

10. Staff Development:

Time is set aside when needed at staff meetings for maths planning, decision making and updating.

Class groupings meet once-monthly and may discuss maths if required.

Sharing of information and expertise etc is done at these meetings.

Maths courses offered by the DWEC or other organisations are communicated to the staff by the post-holder.

Our School Self Evaluation Report has been presented to the staff and our School Improvement Plan will start in September 2015.

11. Parental Involvement - Home School Links:

The maths plan will be made available on the school website.

Assessment results are communicated to parents at Parent/Teacher meetings and through summer reports.

In conjunction with school policy, teachers are available by appointment to discuss maths related concerns with parents.

Parents participate in the Maths for Fun Initiative which began in 2004 and is organised by the HSCC. It operates in 3rd and 4th classes and sessions run for one hour over 4-6 weeks. Parents are trained in the playing of maths games and activities with 4-6 children engaged in each activity. The class teacher manages the overall running of the programme within the classroom.

Mathletics information sessions for parents.

12. Community Links:

See Maths for Fun above.

The school participates each year in Maths Week activities.

Mathletics must be done at home.

Count 4 Success – Junior Achievement.

World Maths Day and Maths Eyes

■ Success Criteria

- That this plan will be used in the planning and teaching of maths in Talbot S.N.S.
- The principal will know from Cúntaisí Míósúla that procedures and approaches in this plan are being followed.
- Feedback from teachers, pupils, parents and inspectors.
- Every child will be working at their own level.
- Standardised results, class tests and teacher assessment.
- Participation and Progress in Mathematics.
- Participation in Maths Week.

■ Numeracy Committee 2014 -2015

- David Ruddy, Brenda Cahill, Brid Considine, Caitriona Wynne, Hugh Gilmartin, Laura Shaw Cathal Carty.

■ Implementation

(a) Roles and Responsibilities:

This plan will be implemented by the staff of Talbot S.N.S.
Review and development of this plan is coordinated by the post-holder.

(b) Timeframe:

This plan will be implemented from September 2015

■ Review

(a) Roles and Responsibilities:

This plan was reviewed in April 2015. It was coordinated by the post-holder.

(b) Timeframe:

It will be reviewed again in April 2018

■ Ratification and Communication

This plan was ratified by the B.O.M. in June 2015
It will be circulated to every teacher.
It will be available on the school website.