

VICTORIA PARK PRIMARY SCHOOL



Mathematics and Numeracy Policy

Date	Policy Reviewed	Policy Amended	Added to Website
September 2018	September 2018	September 2018	December 2018
September 2019	September 2019	September 2019	September 2019
September 2020	September 2020	September 2020	September 2020

CONTENTS

1. Introduction	3
2. Why We Teach Mathematics	3
3. Aims	3
4. Teaching Mathematics	4
5. Mathematics Mastery	4
6. Teaching Time	4
7. Lesson Structure	4
8. 'Using Mathematics' Across the Curriculum	5
9. Using ICT	5
10. Thinking Skills and Personal Capabilities	5
11. Progression and Continuity	6
12. Differentiation	6
13. Special Educational Needs	6
14. Equal Opportunities	6
15. Homework	6
16. Assessment	7
17. Record Keeping	7
18. Reporting to Parents	7
19. Monitoring and Evaluation	8
20. Mathematics Resources	8
21. Review and Monitoring of the Policy	8

1. INTRODUCTION

Mathematics and Numeracy is one of the six Areas of Learning within the Northern Ireland Curriculum. It focuses on the development of mathematical concepts and numeracy across the curriculum. Numeracy is a life skill that will help children to make informed and responsible choices and decisions throughout their lives.

This is the Mathematics and Numeracy policy agreed by the Principal, staff and Board of Governors of Victoria Park Primary School. We value every pupil and the contribution they have to make to learning. Accordingly, we aim to ensure that every child achieves their full potential in this subject and that all are enabled to develop their skills in accordance with their level of ability and understanding of mathematics.

2. WHY WE TEACH MATHEMATICS

Mathematics:

- provides a way of viewing and making sense of the world;
- is used to analyse and communicate information and ideas;
- addresses practical tasks and real-life problems;
- explores new ideas;
- is enjoyable and valuable as a subject in its own right;
- helps children work co-operatively and independently;
- is an integral part of learning and is necessary for full participation in all aspects of the curriculum and is reinforced through other subjects.

3. AIMS

To enable our pupils to:

- develop the knowledge, skills and understanding needed to apply a range of mathematical concepts;
- learn to address problems in real-life situations;
- develop personal qualities, positive attitudes and self-confidence;
- sort independently;
- become numerate and to think mathematically;
- think logically;
- learn to work co-operatively;
- develop an understanding of maths through a process of enquiry and experiment;
- appreciate patterns and relations in mathematics;
- develop confidence in computation by mental, pencil and paper and calculator methods;
- develop confidence in using mathematical language.

4. TEACHING MATHEMATICS

The school's approach to teaching mathematics is based on four key principles:

- a dedicated mathematics lesson every day;
- direct teaching and interactive oral work with the whole class and groups;
- an emphasis on mental calculation;
- planned differentiation.

5. MATHEMATICS MASTERY

Victoria Park was only the second primary school in Northern Ireland to be accepted onto the innovative Mathematics Mastery programme. We want our pupils to build a deep conceptual understanding of concepts which will enable them to apply their learning in different situations. The Mathematics Mastery curriculum is cumulative – each school year begins with a focus on the concepts and skills that have the most connections, which are then applied and connected throughout the school year to consolidate learning. This gives pupils the opportunity to ‘master maths’; by using previous learning throughout the school year, they are able to develop mathematical fluency and conceptual understanding.

We have implemented the Mathematics Mastery programme in P1, P2 and P3 so far and it will be rolled out throughout the rest of the school one year group at a time each subsequent year thereafter.

6. TEACHING TIME

To ensure that there is adequate time for developing numeracy skills, each class teacher will provide a daily lesson for mathematics, which will last about 45 minutes in the Foundation Stage and Key Stage 1 and 50 to 60 minutes in Key Stage 2.

There is also a dedicated daily ‘Maths Meeting’ in each class that lasts approximately 10-15 minutes. This is an integral part of the Mathematics Mastery programme and it allows teachers to consolidate key areas of mathematics outside of the daily maths lesson.

Pupils will also be given opportunities to transfer their mathematical understanding to other contexts across the curriculum.

7. LESSON STRUCTURE

A typical lesson will be structured as follows:

- **oral work and mental calculation** (about 5 to 10 minutes)
whole-class work to rehearse, sharpen and develop mental and oral skills
- **the main teaching activity** (about 30 to 40 minutes)

teaching input and pupil activities
work as a whole class, in groups, in pairs or as individuals

- a **plenary** to round off the lesson (about 10 to 15 minutes)
work with the whole class to sort out misconceptions and identify progress, to summarise key facts and ideas and what to remember, to make links to other work and discuss the next steps, and to set homework.

The Mathematics Mastery lessons in P1-P5 follow the 6-part structure prescribed in the programme: Do Now, New Learning, Talk Task, Develop Learning, Independent Task and Plenary.

8. 'USING MATHEMATICS' ACROSS THE CURRICULUM

The Northern Ireland Curriculum identifies 'Using Mathematics' as one of the three Cross-Curricular Skills that children require for lifelong learning and for operating effectively in society. It is 'the skill of applying mathematical concepts, processes and understanding appropriately in a variety of contexts'. Although our pupils will mainly acquire and consolidate their mathematical knowledge, concepts and skills during their mathematics lessons, they will also be given opportunities to transfer their understanding, as appropriate, to other contexts across the curriculum. These opportunities are identified in each year group's half-termly notes.

9. USING ICT

ICT plays an integral part in enhancing the teaching and learning in Mathematics and Numeracy. The pupils develop their ICT skills in maths lessons by making use of:

- interactive whiteboards;
- iPad apps
- C2k programs;
- Learning NI resources;
- websites;
- CD ROMs;
- calculators;
- Bee-Bots;
- Pro-Bots;
- digital media

The use of ICT is identified in each year group's half-termly notes.

10. THINKING SKILLS AND PERSONAL CAPABILITIES

Opportunities for the pupils to develop thinking skills and personal capabilities in their mathematics lessons are planned for by individual year groups as part of their medium-term planning. Children are given worthwhile experiences which allow them to develop skills in:

- Thinking, Problem-Solving and Decision-Making;

- Self Management;
- Working With Others;
- Managing Information;
- Being Creative.

These opportunities are identified in each year group's half-termly notes.

II. PROGRESSION AND CONTINUITY

The pupils' learning in Mathematics and Numeracy will develop through a line of progression as expressed in the school's scheme of work. Learning intentions will be set and met through the delivery of differentiated lessons. The statutory requirements for Mathematics and Numeracy outlined in the Northern Ireland Curriculum and CCEA's Lines of Development form the basis of the scheme of work. All classes will experience the same range of teaching strategies and learning experiences. All planning will be through the half-termly notes. These are evaluated by the teachers at the end of each half term.

12. DIFFERENTIATION

Differentiation is necessary for children to progress at their own pace therefore activities are planned to match ability levels. Various methods of differentiation are used and these are identified on the half-termly notes where possible.

13. SPECIAL EDUCATIONAL NEEDS

The class teacher is responsible for addressing the specific needs of less able pupils in relation to numeracy and an Individual Education Plan will be drawn up at the start of each term for each child that requires one. The targets are shared with the pupil and their parents and they then sign to indicate they agree with them. The pupil's progress towards achieving the targets is monitored and reviewed at the end of the term. Some pupils will also receive extra support from Mrs Beatty, the school's Learning Support teacher and/or external agencies where appropriate.

14. EQUAL OPPORTUNITIES

Every child, regardless of gender, will be given the opportunity to develop their full mathematical potential. Equal opportunities are provided for boys and girls and this is monitored by analysing pupil performance throughout the school to ensure there is no disparity.

15. HOMEWORK

Maths homework is used to reinforce the learning in class. It will include practical activities, written activities and in some cases rote learning activities. The quantity and frequency of maths homework is outlined in the school's homework policy.

16. ASSESSMENT

Assessment is an integral part of our teaching and learning and is a continuous process. We strive to make our assessment purposeful, using it to inform our planning, to help in identifying any difficulties children may be experiencing in their mathematical understanding and in assisting us to evaluate the quality of teaching and learning.

Assessment mainly takes place during mathematics lessons but other forms of formative assessment such as weekly and end of term tests are also used. The children's skills in 'Using Mathematics' are also assessed termly – their assessed work is collated in individual 'maths portfolios'. More formal assessments, including standardised tests, are also carried out during the academic year:

P1	Bury Infant Check (January)
P3	PTM (April)
P4	PTM (April)
P5	PTM (April)
P6	PTM (April)
P7	PTM (April)

Formal assessment for mathematics is statutory at the end of Key Stage 1 (end of P4) and the end of Key Stage 2 (end of P7).

17. RECORD KEEPING

Individual and class data from the PTM digital assessments are stored in the Staff area of the C2k system. Individual pupil files are kept containing any paper tests carried out. Their Pupil Profiles also contain their annual reports. Both of these are passed on at the end of the year to the next class teacher.

18. REPORTING TO PARENTS

Victoria Park views its relationship with parents as being a valuable interactive partnership working together for the good of the child. We operate an 'open door' policy, welcoming them to discuss any concerns they may have about their children's progress. Teachers are available after school for consultation with regards to a child having difficulties in mathematics.

Parent interviews are held twice during the school year. A written report is also provided at the end of June and includes the teacher's assessment of the progress made in Mathematics and Numeracy. The reports for the P4 and P7 pupils also include the statutory reporting of the end of key stage level achieved in Mathematics by the child.

19. MONITORING AND EVALUATION

Monitoring and evaluation will be carried out by the Mathematics and Numeracy Co-ordinator. This will include collecting the pupils' work in class and at home and monitoring the half-termly planning. Classroom observations are also carried out as part of the PRSD process. The co-ordinator also carries out an annual analysis of each teacher's end-of-year assessments for the pupils in their class; the results of any standardised tests carried out; and the end of key stage results.

20. MATHEMATICS RESOURCES

The school has a wide variety of mathematics equipment and materials. Most of the school's resources are kept in individual classrooms or in the units in the P6/P7 resource area.

21. REVIEW AND MONITORING OF THE POLICY

The policy will be reviewed annually by the Mathematics and Numeracy Co-ordinator.

September 2020