Walter Infant School and Nursery

"To be the Best I can Be!"

MATHEMATICS POLICY

DOCUMENT HISTORY

Version	Action	By	Date
3.0	Approved	Full Governing Body	2 February 2017
3.1	Approved	Full Governing Body	21st Nov. 2017
3.2	Approved	Full Governing Body	November 2019
3.3	Approved	Full Governing Body	February 2022
3.4	Approved		June 2024

Next Review Date: June 2026

1. INTRODUCTION (INTENT)

Our Walter Infant School and Nursery Mathematics Policy is in line with the 2014 National Curriculum and 2021 Early Learning Goals.

The teaching of mathematics in our school reflects the main aims and objectives of the 2014 National Curriculum and the 2021 Early Learning Goals. This policy is a statement of the school's agreed approach to the teaching of the mathematics curriculum. It is to inform teachers, support staff, governors, parents/carers and the school community.

At Walter Infant School and Nursery, by the end of Year 2, or Key Stage 1, our aim is for our children to be '*Junior School Ready*'. We want our children to leave Walter Infant School and Nursery being able to solve mathematical problems by using and applying the skills and knowledge they have developed. We want them to have automaticity in key skills and be able to recall key facts. Best practice approaches have been adopted by the school to facilitate Quality First Teaching (QFT). This policy outlines the teaching of mathematics at Walter Infant School and Nursery. Our school's motto is '*To be the best I can be*', and for this reason we want our children to leave our school being the best possible mathematicians.

The principal focus of mathematics teaching is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, moving between concrete experiences to pictorial representation as well as the abstract. The moving between these should be fluid and not prescriptive.

Pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary.

Pupils will also be taught using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

2. AIMS (INTENT)

- To enable the children to become happy, confident, numerate pupils who enjoy tackling mathematical problems.
- To raise the profile of mathematics, ensuring the children recognise its place as a key life skill.
- To raise standards through a direct and interactive teaching approach.
- To secure high standards through effective teaching and learning throughout the school.
- To use IT effectively to aid the planning, delivery and evaluation of units of work.
- To ensure all our children become **fluent** in the fundamentals of mathematics, through varied and frequent practice so that they have the ability to recall and apply knowledge rapidly and accurately.
- To ensure all our children are able to **reason mathematically** by following a line of enquiry and using appropriate mathematical vocabulary.
- To ensure all our children can **solve problems** by applying their mathematics to a variety of problems and to persevere when seeking solutions.
- To be able to explain their mathematical thinking using **precise vocabulary**.

3. OBJECTIVES (IMPLEMENTATION)

3.1 Children will:

- Take part in a daily mathematics lesson in KS1 and a twice weekly mathematics session in F2 and once weekly in F1.
- Spend a high proportion of this time in a whole class interactive teaching situation.
- Spend time on mental calculation strategies.
- Be given the opportunity to explain their mathematical thinking through oral communication and informal recording methods.
- Make appropriate use of IT to support their learning.
- Be encouraged to supplement their learning at home through informal mathematical activities and games where appropriate.

3.2 Teachers will:

- Ensure they have high expectations for all their pupils.
- Identify specific objectives for their class/year group and plan small coherent steps based on these.
- Carry out regular assessment for learning.
- Monitor pupil progress closely and adapt their teaching accordingly.
- Keep records of individual pupil progress.
- Begin each lesson with a short oral/mental starter based on the agreed Key Instant Recall Facts (KIRFs) for each year group.
- Begin lessons with (and intersperse throughout) key vocabulary drawn from the Vocabulary Progression Document.
- Include a main teaching activity in each lesson using a variety of representations.
- Finish each lesson with a planned and purposeful plenary to review learning and indicate meaningful next steps.
- Ensure their classrooms are suitably equipped to deliver mathematics lessons.

4. ORGANISATION AND TEACHING METHODS (IMPLEMENTATION)

The children are taught in class groups across the whole of the school. In KS1 children then take part in whole class activities. In FS the children all work in a guided group with the teacher following their mathematics lesson. There will also be opportunities all day for children in FS to access continuous provision both in their classrooms and outside. Children across the school undertake a wide range of practical activities for individuals, pairs, groups or the whole class, as appropriate to the task and the individual child's needs.

LSAs are used constructively within the teaching of mathematics, supporting groups or individuals and assisting the teacher through reinforcement and monitoring activities.

5. HOMEWORK (IMPLEMENTATION)

Parents and carers are encouraged to help their children with mathematics at home. Advice on how best to do this for each year group can be found in the booklets made for parents and carers found on our school website. Some examples of suggested activities are to play games which involve counting forwards and backwards, involving children in shopping and cooking activities, looking out for 2D and 3D shapes in the environment and encouraging children to read and tell the time to the hour and half past.

In addition to this, children in Year 2 are expected to learn counting patterns to support their mathematical learning. This could involve number bonds to 10, multiples, division or any number work which would help their learning.

6. PLANNING AND ASSESSMENT (IMPACT)

Teachers work collaboratively in teams to produce weekly plans using the units of work set out in the National Curriculum and the Early Learning Goals. Planning is done on our Walter Infant School and Nursery planning document (see appendix 1 and 2) to ensure consistency. These plans are then adapted to meet the specific needs of the children in each class as the week progresses.
The work is adapted to meet the needs of the children in each class. The children will work in small groups within the classroom, these groups may be guided, supported, or working independently depending on the specific need, with appropriate resources to support the learning. All children will be extended into their Zone of Proximal Development and no child will be restricted into how far their learning can go. Support and extension can fluctuate during a lesson or unit of work based on teacher assessment during the learning.

Teacher assessment judgements are recorded at the end of each unit of work to aid the tracking and monitoring of the progress of individuals and groups of children. These judgements relate to the progress the children are making towards our agreed end of year Age Related Expectations (ARE).

Formative assessments (AfL) are carried out on a daily basis, informing planning, suitability of activities and appropriate levels of support.

7. FOUNDATION STAGE

Mathematics in Foundation Stage is taught in line with the most up to date Curriculum Guidance for the Foundation Stage. This guidance covers important aspects of mathematical understanding and provides the foundation for numeracy.

Early Years Number Sense is used in the foundation stage to supplement the development of mathematical understanding and reasoning skills.

Further details can be found in the Early Years Foundation Stage (EYFS) Policy.

8. INCLUSION

All our children at Walter Infant School and Nursery are entitled to *Quality First Teaching*. We aim to provide for all children so that they achieve as highly as they can in mathematics according to their individual abilities. We will identify which pupils, or groups of pupils are under-achieving and take steps to improve their attainment. Children working at ‘Greater Depth’ (exceeding age related expectations) will be identified and suitable learning challenges provided. Adaptive teaching is key to allowing all children to achieve across a range of abilities.

Children with SEND including those with EHCP’s as well as those working significantly below age related expectations will be planned for and their learning will be outlined on planning documents to ensure their learning is pitched at the appropriate level in order for them to make progress whilst still receiving the right amount of support. Children may be working at any level and this will be reflected through planning and outcomes.

9. EQUAL OPPORTUNITIES

Walter Infant School and Nursery wants every child to succeed and to be the best they can be, regardless of their background or circumstances. Children learn and thrive when they are healthy, safe and engaged. In order to engage all children, cultural diversity, home languages, gender and religious beliefs are all celebrated. A wide range of equipment and other resources should be considered which represent the diversity and backgrounds of all our children. We believe in valuing what the child brings to school and recognise the importance of supporting a child's first language, not only to foster self-esteem, but to assist in the learning of mathematics.

Children in receipt of Pupil Premium funding, as well as those with English as an additional language will be outlined on planning documents and teachers will take their needs into account when planning and adapting plans.

10. ROLE OF SUBJECT LEADER

The Subject Leader is responsible for improving the standards of teaching and learning in mathematics through:

- monitoring and evaluating mathematics, which includes:
    - pupil progress
    - provision of mathematics
    - and the quality of the learning environments
- taking the lead in policy development
- auditing and supporting colleagues in their CPD
- advising on resources
- keeping up to date with recent mathematics developments

11. Monitoring and Review

Monitoring of the standards of teaching and learning in mathematics is the responsibility of the Mathematics Leader. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject and providing a strategic lead and direction for the subject in school. Each year progress is reviewed and any new strategies are included and implemented in the School Development Plan.

12. Related Documents and Abbreviations

- The 2014 National Curriculum
- Early Learning Goals 2021
- School Equal Opportunities Policy
- School Special Educational Needs and Inclusion Policy
- School Early Years Foundation Stage (EYFS) Policy
- School Development Plan

LSAs - Learning Support Assistants
AfL - Assessment for Learning
ARE - Age Related Expectations

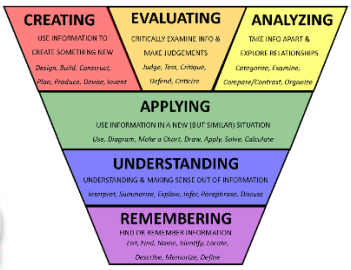
TO BE READ IN CONJUCTION WITH:

- **The Early Years Foundation Stage (EYFS) Policy -** Statutory framework for the early years foundation stage for group and school providers (publishing.service.gov.uk)
- **The English Policy**
- **The Teaching and Learning policy**
- **The National Curriculum**
- **Vocabulary Progression Document**
- **Key Instant Recall Facts Document**

- **Appendix 1 – Agreed Planning Format for Key Stage One**

Walter Infant School

Maths Planning



Class:		Unit Duration:	

SEN	
PPG	
EAL	

Unit Intentions taken from the Interim Assessment Framework (links to SIMS)

National Curriculum Mathematics PoS and Objectives
Number and Place Value
Calculation
Fractions and Decimals
Measures
Geometry
Statistics

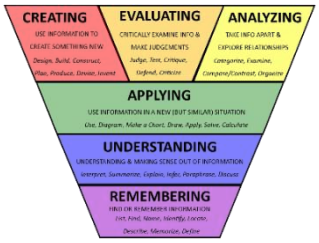
Intended Learning Intention and Success Criteria
LI:

Step 1: Step 2: Step 3:
Lesson Introduction and Outline including AfL/Key Questions (what, who, when, why, where and how)
Vocabulary: Starter: Main:
Group Activities Concrete ► Pictorial ► Abstract
Plenary including AfL/Key Questions and Feedback (what, who, when, why, where and how)

- **Appendix 2 – Agreed Planning Format for FS**

Walter Infant School

Maths Planning



Class:		**Unit Duration:**	5 days – provision out all week

SEN	
PPG	
EAL	

Development Matters: Reception Count objects, actions and sounds. Subitise. Link the number symbol (numeral) with its cardinal number value.

Count beyond ten.
Compare numbers.
Understand the 'one more than/one less than' relationship between consecutive numbers.
Explore the composition of numbers to 10.
Automatically recall number bonds for numbers 0-5 and some to 10.
Select, rotate and manipulate shapes to develop spatial reasoning skills.
Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
Continue, copy and create repeating patterns.
Compare length, weight and capacity.

Number ELG

Have a deep understanding of number to 10, including the composition of each number; - Subitise (recognise quantities without counting) up to 5; - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns ELG

Verbally count beyond 20, recognising the pattern of the counting system; - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Number activity
Intended Learning Outcome and Success Criteria
L.I: Success Criteria Step 1: Step 2: Step 3:
Lesson Introduction and Outline including AfL/Key Questions (what, who, when, why, where and how)
Vocabulary: Starter: Main:
Group Activities Concrete ► Pictorial ► Abstract
Support - Extend -
Plenary including AfL/Key Questions and Feedback (what, who, when, why, where and how)

Continuous Provision
Inside:
Outside:
Focus number songs: