



# **Newbridge Primary School**

## **Maths Policy**

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## Rationale

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

The National Curriculum Order for Mathematics describes in detail what pupils must learn in each year group. Combined with the Newbridge Primary Calculation Policy, this ensures continuity and progression and high expectations for attainment and progress in mathematics.

It is vital that a positive attitude towards mathematics is encouraged amongst all of our pupils in order to foster confidence and achievement in a skill that is essential in our society. At Newbridge we use the National Curriculum for Mathematics (2014) as the basis of our mathematics programme and the White Rose Scheme of Learning. We are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning, as they move through education. Assessment for Learning, an emphasis on investigation, problem solving and the development of mathematical thinking and a rigorous approach to the development of teacher subject knowledge, are therefore essential components of the Newbridge Primary School approach to this subject.

## Aims

We aim to provide the pupils with a mathematics curriculum and high quality teaching to produce individuals who are numerate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and appropriate resources so that pupils can develop their mathematical skills to the full.

### Our pupils should:

- have a well-developed sense of the size of a number and where it fits into the number system
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart to calculate numbers mentally
- calculate accurately and efficiently, both mentally and in writing and paper
- draw on a range of calculation strategies
- make sense of number problems, including non-routine/'real' problems and identify the operations needed to solve them
- explain their methods and reasoning, using correct mathematical terms
- judge whether their answers are reasonable and have strategies for checking them where necessary
- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2d and 3d shapes

## 1. Provision

Pupils are provided with a variety of opportunities to develop and extend their mathematical skills, including:

- Group work
- Paired work
- Whole class teaching
- Individual work including 1:1 tuition where necessary
- Rapid Maths, an intervention used for Years 2-6 to raise attainment in number and calculation.

Pupils engage in:

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving
- mathematical discussion
- consolidation of basic skills and number facts
- maths games
- Puma Assessments three times a year

## 2. Teachers' planning and organisation

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the long-term planning for mathematics taught in the school. Years 1-6 use the White Rose Maths Hub schemes of learning as their medium-term planning documents. These schemes provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving; key aims of the National Curriculum. They support a mastery approach to teaching and learning and have number at their heart. They ensure teachers stay in the required key stage and support the ideal of depth before breadth. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum.

Short-term planned learning consists of daily lesson/flipchart planning. Lessons are planned using a common short-term planning format and are monitored at intervals by the Senior Leadership team and the mathematics subject leader. EYFS planning is based on the medium term plans and delivered as appropriate to individual children with thought to where the children are now and what steps they need to take next.

## 3. Special Educational Needs & Disabilities (SEND)

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, childrens' SSP's incorporate suitable objectives from the National Curriculum for Mathematics or Development Matters and teachers keep these in mind when planning work. These targets may be worked upon within the lesson as well as on a 1:1 basis outside the mathematics lesson. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. These are delivered by trained support staff and overseen by the SENDCo and/or the class teacher. Within the daily mathematics lesson, teachers have a responsibility to not only provide differentiated activities to support children with SEND, but also activities that provide sufficient challenge for children who are high achievers. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability.

## 4. Equal Opportunities

Positive attitudes towards mathematics are encouraged, so that all children, (regardless of race, gender, ability or special needs, including those for whom English is a second language), develop an enjoyment and confidence with mathematics. The aim is to ensure that everyone makes progress, gains positively from lessons and that lessons are inclusive. Lessons involving lots of visual, aural and kinaesthetic elements will benefit all children, including those for whom English is an additional language (EAL). Differentiated questions are used in lessons to help children and planned support from Teaching Assistants and other adults

## 5. Daily lessons:

We recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. We therefore follow our calculation policy and use the concrete, pictorial and abstract, (this is explained in more detail in the calculation policy), teaching methods where necessary. We use accurate mathematical vocabulary in our teaching and children are expected to use it in their verbal and written explanations.

Mathematics contributes to many subjects and it is important the children are given opportunities to apply and use mathematics in real contexts. It is key that time is found in other subjects for pupils to develop their numeracy skills, e.g. there should be regular, carefully planned opportunities for measuring in science and technology, for the consideration of properties of shape and geometric patterns in technology and art and for the collection and presentation of data in history and geography.

We endeavour at all times to set work that is challenging, motivating and encourages the pupils to think about how they learn and to talk about what they have been learning. Additional enrichment opportunities are provided for pupils to further develop mathematical thinking e.g. through cooking, music, and maths investigations and games.

To provide adequate time for developing mathematics, maths is taught daily and discretely. Maths lessons may vary in length but will usually last for about 45 minutes in Key Stage 1 and 60 minutes in Key Stage 2.

At Newbridge Primary School we believe that if firm foundations are established in key mathematical concepts, then children are able to develop a deeper and more cohesive understanding of complex mathematics as they develop. Therefore, throughout EYFS/KS1/2 each class devotes time on a daily basis to developing mental arithmetic and times tables skills.

In Key Stage 1 and Lower Key Stage 2, the children focus on number bonds and times tables.

In Upper Key Stage 2, the children spend 20 minutes each day on a Scholfield and Sims programme (I Can Do Maths) focusing on mental arithmetic and reinforcing times tables(See Times Table Policy).

## 6. Expectations of presentation and marking:

- Children will write in books with squares with one digit, one square
- Each piece of work must be dated and include a WALT
- Staff will follow the feedback and marking policy
- For differentiated work, children will indicate whether it is a ready, steady or go activity
- Staff will mark in black pen, children will mark and correct in green pen
- Lines to be drawn with a ruler

## 7. Role of the Maths Subject Leader

- To lead in the development of maths throughout the school, write the relevant targets for the School Development Plan and review this three times per year
- To monitor the planning, teaching and learning of mathematics throughout the school.
- With the SLT, to raise standards in maths teaching, learning and assessment
- To analyse data for each year group taken from the PUMA tests and teacher assessment. These are carried out three times a year from Year 1 to 5
- Liaise with the Senior Leadership team regularly to monitor progress and quality of teaching across the school
- Where necessary, draw upon the knowledge and experience of our local authority maths lead to support both staff and children within the math curriculum
- To provide teachers with support in the teaching of mathematics.
- To provide staff with CPD opportunities in relation to maths and the School Development Plan
- To monitor and maintain high quality resources.
- To keep up to date with new developments in the area of mathematics
- To meet regularly with the link Governor to inform them of progress and updates within the curriculum
- To organise and meet with our Better Maths Partners. These are parents who volunteer on a weekly basis to help our children with their mental arithmetic