



## Introduction

Mathematics skills and knowledge are essential to everyday life. They are critical to science, technology and engineering, and are necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. *National Curriculum 2014*

## Aims of the 2014 National Curriculum

The intention is that pupils:

- Become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- Can **solve problems** by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The National Curriculum sets out year-by-year programmes of study for key stages 1 and 2. This ensures continuity and progression in the teaching of mathematics.

## Aims of the 2022 Early Years Foundation Stage Profile

The EYFSP sets standards for the learning, development and care of children from birth to five years old and supports an integrated approach to early learning. This is supported by the Development Matters non-statutory guidance.

The EYFS Framework in relation to mathematics aims for our pupils to:

- 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;
- 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.

## **Mathematics at Bowness-on-Solway Primary School**

Our school aim in mathematics are to develop:

- Positive attitudes towards the subject and awareness of the relevance of mathematics in the real world;
- Competence and confidence in using and applying mathematical knowledge, concepts and skills;
- An ability to solve problems, to reason, to think logically and to work systematically and accurately;
- Initiative and motivation to work both independently and in cooperation with others;
- Confident communication of maths where pupils ask and answer questions, openly share work and learn from mistakes;
- An ability to use and apply mathematics across the curriculum and in real life;
- An understanding of mathematics through a process of enquiry and investigation.

We aim to provide a stimulating and exciting learning environment that takes account of different learning styles and uses appropriate resources to maximise teaching and learning.

### **Breadth of Study**

Through careful planning and preparation, we aim to ensure that throughout the school children are given opportunities for:

- Practical activities and mathematical games;
- Problem solving, based on topic themes and enriching challenge tasks;
- Individual, group and whole class discussions and activities;
- Open and closed tasks;
- A range of methods of calculating;
- Working with computers as a mathematical tool, including interactive whiteboards;
- Calculators and programmable toys.

### **Planning**

#### *Long-Term Planning (LTP)*

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number; Numerical Patterns) provide the basis for long term planning for mathematics taught in the school. Bowness-on-Solway School has developed its own LTP to take into account the composition of each class and the needs of our pupils. The LTP sets out which areas of mathematics to be covered, for which pupils, when, and for how long.

#### *Medium-Term Planning (MTP)*

Our own medium-term planning documentation provides the basis for the objectives to be taught within each area of maths for each year group and class.

The MTP provides teachers with a clear breakdown of statutory objectives in order to ensure full curriculum coverage. The MTPs are explicit about coverage of all aspects of the subject including reasoning and problem-solving.

#### *Short-Term Planning*

The school subscribes to – but is not limited to - White Rose Maths, Classroom Secrets, Lancashire Grid For Learning, Twinkl and Busy Ant resources. Teachers make informed judgements about the most suitable resources to support each objective, based on their ongoing assessment and knowledge of the children they teach.

As a core subject, mathematics is taught daily to all children of statutory school age. Teachers of the EYFS ensure the children learn through an appropriate blend of adult-led activities and child-initiated activities both inside and outside of the classroom.

## **Lesson Composition**

In all lessons, learning objectives and success criteria are clearly displayed and discussed. The emphasis in lessons is to make teaching interactive and lively, to engage all children, encouraging children to talk about mathematics. Lessons involve elements of:

- Instruction – giving information and structuring it well;
- Demonstration – showing, describing and modelling mathematics using appropriate resources and visual displays;
- Explanation and illustration – giving accurate and appropriately-paced explanations;
- Questioning and discussion;
- Consolidation;
- Reflection and evaluation of responses – identifying mistakes and using them as positive teaching points;
- Summarising – reviewing mathematics that have been taught, enabling children to focus on next steps.

## **Differentiation**

The learning needs of all pupils are matched using a variety of approaches, including but not limited to:

- Planning tasks and activities for different levels of understanding;
- Planning common tasks of an investigative nature, accessible to all children and which are differentiated by stated outcome;
- Offering children support in the form of teacher/ teacher assistant support, or practical learning resources and manipulatives;
- Offering differentiated stated outcomes.

Pupils are encouraged to make informed choices when selecting their own tasks, so that 'ability' labels are discouraged and ceilings are removed.

## **Special Educational Needs & Disabilities (SEND)**

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children's IEPs 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 SENCO and/or the class teacher.

## **Disadvantaged Pupils**

Pupil Premium funding is, in part, ring-fenced for a proportion of staffing to provide guaranteed teacher / teaching assistant time for disadvantaged pupils. This is to close the 'attainment gap' and provide enhanced learning opportunities so that no child is left behind. Practical and real-life experiences are emphasised with disadvantaged pupils in mind.

Pupils may be in receipt of small group or 1:1 interventions in order to support key skills and knowledge.

## **Pupils' Records of Work**

Children are taught a variety of methods for recording their work and are encouraged and helped to use the most appropriate and convenient. Children are encouraged to use mental strategies and their own jottings (including whiteboard work) before resorting to more formal written methods. Children's own jottings to support their work is encouraged throughout all year groups.

## **Feedback**

Feeding back on children's work is essential to ensure they make ongoing progress. Work is assessed against the learning objectives and success criteria, in line with the school's feedback policy, and includes next steps. Children are encouraged to self and peer-assess their work and are given time to respond to feedback and make corrections or improvements. Feedback and next steps are largely given in a timely fashion, 'live' while work is in progress, i.e. during the lesson where possible. Teachers may feed back verbally and/or use green ink. Children show their responses to this in purple ink.

## **Assessment**

This is an integral part of teaching and learning and is a continual process. Teachers make assessments of children daily through:

- Regular live feedback;
- Analysing errors and picking up on misconceptions;
- Asking questions and listening to answers;
- Facilitating and listening to discussions;
- Making observations.

These ongoing assessments inform future planning and teaching. Lessons are adapted readily and short-term planning is evaluated according to their findings.

Termly assessments are carried out in Years 1-6 using the assessment materials for each year group provided by NTP, in line with our long and medium-term planning. These materials used alongside judgements made from class work support teachers in making informed assessments of each child's learning which inform future planning.

The progress of children in Reception is recorded using the Focus Education *Progression Towards the New ELG and Beyond*.

Pupil progress meetings are timetabled each term for all classes. Progress of pupils is discussed and appropriate intervention considered and put in place where appropriate.

Pupils reaching the end of key stages 1 and 2 complete the national tests (colloquially known as *SATs*) in May.

## **Homework**

Children are given weekly maths homework, based on key instant recall facts (KIRFs) including multiplication tables so that a further opportunity is provided for consolidation. From September 2022, this also includes the use of the online *Doodle Times Tables* resource from Year 1 onwards.

## **Reporting to Parents and Carers**

Parents are informed of their child's progress in mathematics through:

- Informal meetings when deemed appropriate;
- Termly parent consultation meetings in the autumn;
- Termly written reports.

In the case of pupils who have SEND, through regular targets agreed and recorded in an IEP (Individual Education Plan), discussed with the class teacher, SENCO and parents each term.

## **Role of the Maths Subject Leader**

With support from the headteacher, the subject leader for maths will:  
Lead in the development of maths throughout the school.  
Monitor the planning, teaching and learning of mathematics throughout the school.  
Help to raise standards in maths.  
Provide teachers with support in the teaching of mathematics.  
Provide staff with CPD opportunities in relation to maths within the confines of the budget and the School Improvement Plan.  
Attend own CPD and cascade the findings to staff.  
Monitor and maintain high quality resources.  
Keep up to date with new developments in the area of mathematics.

## **The Governing Body**

A governor representative attached to the maths coordinator will discuss the subject and its implementation as part of the teacher-governor meeting.

Visits are timetabled and the governor completes a written report to present to full governors.

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Policy written and adopted by Bowness-on-Solway Primary School staff **June 2022**.

Ratified by Governing Body **July 2022**.

Date to be reviewed **July 2024**.

<b>Role</b>	<b>Print Name</b>	<b>Signed</b>	<b>Date</b>
Mathematics Subject Leader	Amber Story	<i>A. Story</i>	<i>July 2022</i>
Headteacher	Stuart Walsh	<i>S. Walsh</i>	<i>July 2022</i>
Chair of Curriculum Committee	Gill Barker	<i>G. Barker</i>	<i>July 2022</i>
Chair of Governors	Rachael Holliday	<i>R. Holliday</i>	<i>July 2022</i>