



Mathematics Policy

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Curriculum Intent Statement:

'A Family Committed to Making a Difference'

At Friezland Primary School we aim to develop well-rounded, resilient individuals who demonstrate mutual respect and tolerance and who have a positive impact on their community and the wider world. Our Curriculum is designed with this in mind. We aim to encourage a life-long love of learning and develop skills for life through the delivery of exciting, challenging and stimulating experiences within and beyond the classroom.

We understand that mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. We aim to deliver a high-quality mathematics education which 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. Emphasis on this starts in Reception and continues right the way through to Year 6.

Aims of the Mathematics Curriculum:

The national curriculum for mathematics aims to ensure that all 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 non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

(National Curriculum 2014)

Mathematics Curriculum Coverage

The Early Years Foundation Stage (EYFS) Mathematics is split into two main areas:

Number

Children at the expected level of development will:

- 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

Children at the expected level of development will:

- 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.

Key Stages 1 and 2 Mathematics is delivered through the following areas:

- Place Value
- Addition and Subtraction
- Multiplication and Division
- Fractions
- Measures
- Geometry and Statistics
- Algebra and ratio and proportion are taught in Year 6.

Implementation

Our Mathematics curriculum is based on the National Curriculum Programmes of Study and the Early Years Foundation Stage (EYFS). We use the White Rose Maths Scheme which uses a **mastery** approach to maths teaching. This is a research-driven teaching and learning method that meets the goals of the National Curriculum.

What does it mean in practice? In summary, a mastery approach...

- **Puts numbers first:** The schemes have number at their heart, because it is believed confidence with numbers is the first step to competency in the curriculum as a whole.
- **Puts depth before breadth:** Knowledge is reinforced again and again.
- **Encourages collaboration:** Children can progress through the schemes as a group, supporting each other as they learn.
- **Focuses on fluency, reasoning and problem solving:** It gives children the skills they need to become competent mathematicians.

Concrete, Pictorial, Abstract

At the heart of the mastery approach is the Concrete Pictorial Abstract (CPA) approach. Research shows that when children are introduced to a new concept, working with concrete physical resources and pictorial representations leads to a better understanding of abstract concepts. CPA is used throughout the schemes of learning via the small-step teaching slides and resources.

Each class has a daily lesson that includes whole-class or group teaching as well as independent learning. At Friezland we also provide opportunities for more able pupils to explore mathematical concepts at a deeper level through the use of problem solving and

reasoning tasks and for children who need further reinforcement, allow for further practice of key skills to ensure no child falls behind. All children have access to concrete resources at any stage.

Teaching assistants are actively involved with the teaching and learning process and work closely with class teachers to implement effective learning strategies with small groups or individuals. They also lead pre-teaching and intervention activities for children where identified in class or through individual action plans. The teaching strategies used involve quality first teaching, which is interactive and engages the children. Cross-curricular links with mathematics are encouraged across the school in all year groups.

Times tables

The learning of times tables is integral to children's fluency in mathematics, and we work towards knowing all of the multiplication and division facts by the end of Year 4. (Please refer to the 'Teaching and Learning Timetables at Friezland' document for the wide range of strategies, resources and activities we use to practice and consolidate times tables skills to aid long-term memory).

APE and MAD

At Friezland, pupils are encouraged to 'answer, prove and explain' their understanding wherever possible (APE) and this is modelled to them by the teacher, whether it be through using concrete resources, informal jottings, formal written methods and written or oral explanations. Pupils are also taught to self-check, edit, evaluate and revise their work (Make A Difference – MAD) in response to feedback, using a green pen.

The Role of the Mathematics Leader

The Maths lead will collaboratively alongside the headteacher, governors and whole staff:

- to help monitor and evaluate pupil learning and the implementation of the policy and National Curriculum objectives, giving feedback and discussing next steps as appropriate
- to keep up to date with current views in terms of mathematics practice via training, joining HUBs, disseminating this to colleagues via INSET/discussion
- to demonstrate good practice within own class teaching
- to be responsible for the purchase and organisation of resources within budgetary constraints
- to report to Governors about what Maths 'looks like' at Friezland and current standards within the subject.

Assessment

It is the responsibility of the class teacher to assess pupils within the class. Pupils' work is assessed on an ongoing formative basis through feedback and marking, and teachers use a range of evidence to inform their judgements. We aim to make assessment purposeful, allowing us to match teaching activities to the needs of the pupils to ensure progress. Information for assessment will be gathered in various forms:

- by talking to pupils and gathering 'Pupil Voice'
- by observation and marking work (including live marking during the lesson)
- by informal checks e.g. rapid recall of number facts and providing opportunities for application
- by checking against end of year objectives outlined in the national curriculum
- by End of Block assessments In KS1 and KS2
- by End of Term assessments in KS1 and KS2
- by regular Times Tables Checks in LKS2 (via TTRockstars)
- by regular arithmetic and reasoning assessments in Key Stage 2
- by SATs at the end of Key Stage 2
- by statutory Times Table Checks in Year 4

We teach children to assess their own progress as mathematicians, as well as their understanding of individual concepts and encourage them to consider their next steps.

Termly staff meetings enable teachers to share and review good practice. 'Book Looks' also ensure that standards across all year groups can be moderated. In addition, teachers also attend moderation sessions with colleagues across the borough through DLP and LA moderation sessions, to ensure judgements are accurate.

Impact

This Maths Policy outlines our commitment to deliver a quality first mathematics education to all pupils. Through a progressive scheme and supportive environment, we will develop confident, competent mathematicians who are well-prepared for their future educational journeys.

Equal Opportunities

Provision is made for all pupils regardless of ability, disability, special educational need, medical condition, gender, faith or ethnicity and reasonable adjustments are made in a range of ways. All children have a right to be treated equally and the school will take measures against those who do not abide by this ethos. We aim to set goals which are challenging but realistic, with an aim to provide opportunities for pupils to work at greater depth in order to embed their knowledge skills and understanding.

Monitoring & Evaluating

Policy and practice is monitored and evaluated on a regular basis in accordance with the school development planning cycle. The provision will be monitored by the subject co-ordinator in conjunction with the Headteacher and Governing Board. Monitoring may take the form of learning walks, lesson observations, data analysis, planning or book looks. Feedback will be given to all staff along with recommendations to inform future policy, planning and practice. Professional development of the coordinator will be maintained to ensure that new initiatives and curriculum updates are fed back to staff and incorporated into regular practice.

Data Protection Statement

The procedures and practice created by this policy have been reviewed in the light of our Data Protection Policy. All data will be handled in accordance with the school's Data Protection Policy.

Data Audit for the Mathematic Policy					
What?	Probable Content	Why?	Who?	Where?	When?
Pupil assessment data	Name D.O.B. Test data TA/ test data	Monitor a child's progress and identify next steps Well-Being of Your Child	All Staff (as necessary)	Staff electronic records Paper tests are stored in locked filing cabinets in each classroom / basement Data is deleted / shredded as necessary	Held on File throughout a child's time at school Key data is passed onto a new School when moving on Some data is archived until the child is 25 (e.g. SEND pupil)

As such, our assessment is that this policy:

Has Few / No Data Compliance Requirements	Has A Moderate Level of Data Compliance Requirements	Has a High Level of Data Compliance Requirements
	✓	

This policy will be reviewed every three years or sooner if legislation / school assessment systems change.