



MATHEMATICS POLICY

INTENT

We know that our children start school with different experiences of maths understanding. Our curriculum is designed to ensure that all children have access to high quality learning that is both challenging and enjoyable. This supports children in becoming inquisitive and resilient, preparing them for their future as a lifelong learner.

- We ensure that all children have a secure understanding of all mathematical concepts.
- We use the CPA approach to ensure that children easily make links between practical equipment, pictures and abstract numbers.
- All children are exposed to age related expectations in a keep up approach through mastery. Adaptive teaching approaches are used to ensure success.
- Specific language development and practical experiences in maths will enable them to become "deep thinkers" acquiring maths skills that can be recalled quickly and transferred and applied in different contexts.
- We build fluency through clear instant recall facts and provide practice at securing these.
- Reasoning and competence in problem solving is presented in different ways to enable children to become resilient, making clear connections across the areas of maths, using their knowledge in other subjects and in their everyday lives.

IMPLEMENTATION

The calculation policies clearly show the methods that we teach to solve the four operations. In school children are taught a range of mental and written methods, children are encouraged to consider the most efficient methods. All pupils have access to daily maths lessons.

Long term plans are in place for all year groups and these are followed by staff.

Unit of work

- National Curriculum Programmes of Study are used for long term and medium-term planning.
- White Rose Maths (WRM) small steps - this programme is used for long term, medium term, weekly and daily lessons.
- A mastery format is delivered where all children working at their age-related expectations all start at the same point and then progress through the fluency and reasoning problems at their own pace.
- Prior learning - this is achieved through targeted questioning and the analysis of the end of unit assessments for the previous year group and the current year group (where appropriate) that are completed at the beginning of a unit to identify strengths and next steps.
- Working walls - reflect the unit of work that is being taught and demonstrate the build-up of skills throughout the unit incorporating the CPA model and key vocabulary. Working walls are referred to regularly throughout lessons to encourage and promote

independence. Working walls also reflect the journey that the class has been on, this supports retrieval of previous skills in order to apply to new learning.

- Vocabulary - a wide range of mathematical vocabulary to be modelled and displayed on the working wall and used in context to demonstrate understanding.
- Teach - The CPA (concrete, pictorial, abstract) approach is used to encourage children to make links between practical equipment, pictures and abstract numbers whilst learning new ideas and building on their existing knowledge to explore abstract concepts in a more familiar and tangible way.
- Application - varied fluency, reasoning and problem solving are used to develop a deep and secure knowledge and understanding of mathematical concepts.
- Assessment - through live marking, formative and summative assessment (prior learning and end of unit assessments) as well as through questioning, feedback and plenaries.

Lesson structure

- Lessons are planned from the correct year groups POS. Teachers are aware of prior learning and how this feeds into understanding new content. Teachers plan to enable all learners to make connections between prior learning and new learning.
- New content is broken down into small steps to ensure that lessons/ units have clear objectives that are progressively linked. There are planned opportunities for spaced retrieval to ensure changes in long term memory are embedded and can be recalled upon quickly in order to apply knowledge in different contexts.
- Mathematical vocabulary is explicitly taught so that children can discuss their thinking and explain their reasoning. Stem sentences are used to support pupils in speaking in full sentences in order to communicate their ideas and understanding.
- All sequences follow these 8 steps as a lesson structure, some steps may be taught over two sessions.
 1. Can you still?
 2. Share learning objective
 3. Guided Input
 4. Guided Practice
 5. Independent Practice
 6. Varied Fluency
 7. Reasoning
 8. Plenary
- Manipulatives are used throughout lessons as part of our adaptive teaching approaches to ensure that all children have success. These manipulatives are carefully selected to be the most efficient and appropriate.
- Metacognitive approaches are used as a way for children to become independent in their thinking, children are encouraged to plan, do and review in order to rehearse their thinking.

Key instant recall facts

- Daily mastering number sessions are taught outside of the maths lesson in order to give additional time for fluency practice. These support pupils in developing number sense.
- Teachers follow the whole school progression document to ensure coverage of key skills in each year group.
- In nursery these are used as the starter to their session.
- Number of the week fluency mats are used to support children recalling facts about a given number, these allow children to recall facts such as doubles, halves, multiplication facts and representation of numbers.

Numbots and Times Table Rockstars

Children have the opportunity to support their learning through the online app 'Numbots.' This is an online game that when played little and often will significantly improve a child's recall and understanding of number bonds and addition and subtraction facts. These are critical foundations in mathematics. It was designed with the Mastery approach in mind. The children are able to move through the games completing the different levels in the stage becoming more confident as they go.

Children in Year 2 also benefit from the Times Table Rock Stars Programme. It is a structured sequenced game that allows the child to master their times tables. There is time allocated to pupils to go on TT Rockstars daily to practice times tables.

Number formation

This is taught through the use of Ten Town and its characters. These are introduced in EYFS and used throughout school to secure formation. The children have access to a ten-town number strip in lessons to support them with formation and as a tool for them to check their number formation against.

Assessment

Assessment is an integral part of the teaching and learning process. Assessment is used to inform planning and to facilitate effective learning. The assessment of children's work is on-going to ensure that understanding is being achieved and that progress is being made.

Formative assessment

Effective marking and feedback are an important element of teachers' responses to children's learning. This may be given either orally during live marking it is always:

- specific, accurate, and clear
- celebrates success
- compares what a pupil is doing right now with what they have needed to improve before
- provides specific guidance on how to improve as their next step
- comment sheets for practical sessions within EYFS and KS1
- DCPro observations are completed in EYFS

Summative assessment

This supports teacher judgments, each class in KS1 undertakes a termly formal assessment.

- White rose progress checks (termly)
- End of unit checks
- NTS maths papers (end of year)
- KS1 SATS

In EYFS - ELG - number and numerical pattern are continually assessed in order to make summative judgments. Observational evidence supports teacher assessment.

Monitoring

Role of the leaders

- Plan an effective and varied schedule of monitoring including moderation, which is triangulated through in school and MAT moderations.
- Respond quickly and supportively to all barriers preventing outstanding implementation and impact in Maths.

- Support staff to identify potential barriers and plan effective and quantifiable interventions.
- Use assessment information to provide effective CPD and challenge.
- Provide clear updates to the LCGB link governor, Headteacher and SLT.

Monitoring consists of;

- Book scans
- Lesson observations (formal and drop-in)
- Pupil discussions
- Moderation (internal and external)
- External teaching reviews

All class teachers and support staff will be given a copy of the structure document and manipulatives document. These documents outline a set of non-negotiables that all members of staff will follow to allow for consistency in Maths across the school.

Maths across the Curriculum

Although the mathematics curriculum is organised as a discrete subject, there are many potential cross-curricular activities, linked closely to the topic for that term. Making links between areas of learning deepens children's understanding by providing opportunities to reinforce and enhance learning.

Parent Involvement

Parent workshops take place across the MAT and are run by the maths leaders, these focus on key knowledge for each year group. Parental reports also take place at key points through the year both verbally and written. Parents are invited to watch me learn sessions for maths to allow parents to see the year group expectation.

Inclusion

At Alexandra Infants' School, it is our belief that all children have an equal right to a broad and balanced curriculum, which enables them to meet their full potential. Through our teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those who are deemed more able and talented and those learning English as an additional language, and we make all reasonable adjustments to achieve this. For further details, see separate policies: Special Educational Needs; SEND Information Report; Equality policy and scheme; Able and Talented; English as an Additional Language (EAL).

As a school we strive to ensure that all children, staff and members of our school community are treated fairly and equally. All children have equal rights to access all areas of the curriculum, regardless of race, gender, religious beliefs, sexual orientation and disability. Within this subject area, the Senior Leadership Team (SLT) and all staff endeavor to provide the appropriate provision for this to occur. This policy follows the guidelines and practices

that are stated and outlined in Alexandra Infants' and Junior Schools Equality Scheme. Please see this policy for further detail.

Policy monitoring and review

The Maths subject leader is responsible for the monitoring and implementation of this policy. The subject leader reports on the effectiveness of the policy to the head teacher and the governing body.

This policy will be reviewed annually.

Subject leads:

Hayley Thompson and Amanda Smith March 2023

Updated June 2024 - Subject leads - H.Thompson and A.Smith

Updated May 2025 - Maths Lead - H.Thompson

Updated February 2026 - Maths Lead - H.Thompson