



ASHLANDS PRIMARY

Mathematical Policy

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Introduction

At the centre of the mastery approach to the teaching of mathematics is the belief that all pupils have the potential to succeed. They should have access to the same curriculum content and, rather than being extended with new learning, they should deepen their conceptual understanding by tackling challenging and varied problems. They should be able to explain their thinking through using appropriate mathematical vocabulary. Similarly, with calculation strategies, pupils must not simply rote learn procedures but demonstrate their understanding of these procedures through the use of concrete materials and pictorial representations.

The intention of this process, at Ashlands primary, is to provide all children with full access to the curriculum enabling them to achieve confidence and competence- 'mastery'-rather than failing to develop the skills they need for the future.

Teachers reinforce an expectation that all pupils are capable of achieving high standards in mathematics.

- The large majority of pupil's progress through the curriculum content at the same pace. Adaptive teaching is achieved through deepening knowledge and individual support, use of quality first teaching strategies, the concrete-pictorial and abstract approach or intervention.

- Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge.

- Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying concepts in tandem.

Children practise, recall and recap previous learning daily.

- Teachers use precise questioning and other assessment tools in class to assess conceptual and procedural knowledge regularly to identify those requiring intervention so that all pupils keep up.

Aims

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.

At Ashlands, it is recognised and taught that Mathematics helps children to make sense of the world around them. It enables children to understand and appreciate relationships and patterns in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

Mathematics Curriculum Planning

Mathematics is a core subject in the National Curriculum, and we use the White Rose scheme of learning (R-Y6) as the basis for implementing the statutory requirements of the programme of study for mathematics. We use a maths mastery approach as a school and follow its 5 key steps. The whole class is taught mathematics together, with no differentiation by acceleration to new content. The learning needs of individual pupils are addressed through careful adaptation through scaffolding, skilful questioning or appropriate intervention, in order to provide the necessary support and challenge. Classes are taught in mixed ability groups and a ping-pong style approach is used where possible as the class move through their learning as a whole group, culminating in individual/paired practice.

We carry out the curriculum planning in mathematics in line with the structures and recommendations outlined in the National Curriculum. Our weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught.

Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the Early Years Foundation Stage statutory framework. The techniques used through maths mastery will be introduced into EYFS so that children will develop their understanding of mathematics and prepare them for KS1 maths. We give all the children ample opportunity to develop their understanding of mathematics. We aim to do this through varied activities that allow them to use, enjoy, explore, practise and talk confidently about mathematics. Reception use the mastering number program to support children gaining a 'good number sense'.

How we assess mathematics

Short term (diagnostic)

These are part of every maths lesson. Their purpose is to ensure that children have achieved the main teaching points/objectives of a lesson or unit of work. If there are misunderstandings, they will be put right. They will inform the teacher to aid next step planning and teaching. Teachers will assess children informally through questioning, lesson discussion (whole class, group or individually), tasks/activities, marking of work or on occasion a short test in verbal or written form. The KPI's (Key Performance Indicators-see appendix) are the main objectives that teachers assess against.

Medium term (Formative)

In Key stage 1/2 the children are assessed through written tests at the end of each term and teachers use these outcomes to inform their teacher assessment judgement which is recorded on the school tracking system. This system is updated at the end of Autumn term, Spring term, after SATs week and the end of the Summer term.

Early Years use their observations and knowledge of the children to record the age and stage of a child at the end of October (baseline), Autumn term, Spring term and the end of the academic year. Each termly assessment feeds into pupil progress meetings where school leaders can focus in on any areas of need.

Long term (Summative)

Long term assessments are used to assess children against national age-related expectations. They are also used to give extra information about individual children's attainment and progress so that the teacher can report to the next teacher and the child's parents. It also allows the Head teacher, Senior leadership team or maths subject leader to brief the governing body, the staff or trust on overall progress towards the school's targets for mathematics and look at trends, gaps or areas to address as a school.

To make a summative judgment each teacher will look at each individual child's attainment, drawing upon class records, short/medium term assessments, informal notes and the cumulative picture they have built up over the academic year.

Please also refer to the schools marking and assessment policies.

How we monitor mathematics

The mathematics subject leader monitors teaching throughout the school and reviews pupil performance against national expectations. An annual cycle of book scrutiny, lesson observation/learning walks and talking to pupils/staff will support evaluation of current practice and will identify strengths and areas of development. These 'areas of development' will then be actioned through the annual co-ordinators action plan in order to improve current practice. The subject leaders will also use their expertise to support other teachers.

Resources

Maths resources for both teachers and pupils at Ashlands Primary school are stored within each classroom, concrete resources are always readily available for pupils to use. KS1 & 2 also have extra resources stored in the Maths cupboard in the KS2 corridor. Early Years have their own resources stored in the maths shared storage cupboard and outside shed.

Classes all have access to a variety of resources to support teaching the National Curriculum for maths. The White Rose maths scheme is used by the school to ensure a progressive learning journey. Alongside this the mastering number program is taught in EY and KS1 to help secure good number sense and fluency. Other interactive software and schemes such as Primary Stars, Target maths, NRich, Classroom secrets and other online subscriptions are all used to enhance this scheme and provide a range of activities for children to complete, that suit the needs of each individual class/child.

Presentation

Children at Ashlands Primary are taught to take pride in their learning and that it is set out neatly.

In maths, the date will be written as a short date e.g. 27.11.23. The title in KS2 will be the Learning objective written by the children, in lower years these may be stuck in depending on the ability of the class and known as WALT (We Are Learning To).

Children should use 1 square per digit when writing numbers or calculations.

New pieces of work will generally not be started on a new page each time.

Pencil must always be used in maths book.

Any colouring in must be done in crayon or pencil crayons, felt tips must not be used

in exercise books. Any mistakes will be crossed out with one straight line through the error or rubbed out. Children are expected to keep their books neat and tidy. Printed activities for children will be stuck in by children (Rec/Y1 will have this done for them). They will be encouraged to stick these sheets in level.

Inclusion

The teaching of mathematics at Ashlands primary school is free from bias or generalisation in respect of gender, class, race or disability. Resources will reflect the pluralistic society in which we live, avoid stereotyping and discrimination and promote positive self-images. The mastery curriculum supports inclusivity, where all children can focus on the same and given access to the most powerful maths.

Safeguarding

Ashlands primary school is committed to safeguarding and promoting the welfare of its pupils and expects all staff and visitors to share this commitment.

This policy should be read in conjunction with the Ashlands Primary School Calculations Policy, Assessment and Marking Policies.

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