
Policy on Maths

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Pardes House Primary
School

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POLICY ON MATHS

Mathematics is a creative discipline. The language of mathematics is international. The subject transcends cultural boundaries and its importance is universally recognised. Mathematics has developed over time as a means of solving problems and also for its own sake. Mathematics can stimulate moments of pleasure and wonder when pupils solve a problem for the first time, discover a more elegant solution, or notice hidden connections.

Introduction

At Pardes House, we aim to help children to develop a love for Maths through development of mental skills, calculation, investigation, problem-solving and the use of different resources.

We recognise that Maths is a core subject within the National Curriculum and a pre-requisite for lifelong progress. All children at the school should be taught in ways appropriate to their age and abilities.

This policy outlines the teaching, organization and management of mathematics taught and learnt at Pardes House. The policy is based on the 2014 expectations and aims of the 'New Curriculum' for mathematics and the Early Years 'Development Matters' EYFS document. This ensures continuity and progression in the learning and teaching of mathematics.

Intent

Our intent for Maths is to teach a rich, balanced and progressive curriculum using Maths to reason, problem-solve and develop fluent conceptual understanding in each area. Mathematics forms an important part of our broad and balanced curriculum and is a subject where we endeavour to ensure that children develop an enjoyment and enthusiasm for learning, whether through the direct curriculum or through extra-curricular opportunities.

The structure of the Maths curriculum across our school ensures clear progression in line with age-related expectations. Teaching the curriculum content in a spiral curriculum allows children to explore skills and knowledge and gain a secure understanding of particular subject matter. Using a spiral curriculum also takes into account forgetting, unlearning and relearning.

Key knowledge and skills will be revisited regularly allowing repetition in order to embed learning. We aim to provide a range of different types of mathematic learning opportunities and promote open-ended STEM questioning, where pupils decide how to try to find and explain their answers. The application of Maths is a skill we use on a daily basis and is an essential part of everyday life. Hence, problem-solving forms a key part of our Maths curriculum.

In Maths, we aim for all our children to grow in confidence and ability, where they are fluent in their understanding of number skills, have a secure knowledge of their times tables, have a

strong understanding of different topic areas and can apply their Maths knowledge and skills to life and the world around them.

Aims

The school's aims are that children will:

- Enjoy the subject and study it with increasing confidence and a sense of achievement;
- Achieve their best in all areas of Maths;
- Apply these skills with confidence and understanding to everyday situations and problem solving.

The National Curriculum for mathematics aims to ensure that all pupils:

- Become fluent in the fundamentals of mathematics, including through varied and frequent practise 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 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.

Maths is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into distinct domains, but pupils should make rich connections across the mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to Science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study broadly at the same pace. However, decisions about when to progress should always be based on the security of the pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Principles of the Teaching and Learning of Maths

Planning

- Planning begins from a thorough understanding of the children's needs gleaned through effective and rigorous assessment and tracking, combined with high expectations and ambition for all children to achieve.
- Plan according to the spiral curriculum set out termly.

- Use a variety of resources to help secure learner's knowledge. This is not limited to a specific scheme.
- Medium term plans are compiled by the beginning of each term. This gives clear outline of what will be taught.
- Year 4 times table testing – government set.

Maths lessons

At the school, dedicated mathematics lessons every day ensure high standards. The daily lesson is required to be about 45 minutes in Key Stage 1 and 45-50 minutes in Key Stage 2.

Though the nature of lessons will be very different depending on the needs of the class, children should be: active; practicing skills they haven't yet mastered; learning something new OR learning to apply their knowledge to different contexts. They should be working at a good pace and being productive; sharing their thoughts and methods and being successful.

Books are to have the date and LO and ruled off. Margin down the side of the page and in the middle of the page.

Times tables

At Pardes House, we have high ambition for the learning of times tables. This is then reflected in the tables we expect our pupils to know at different stages.

- Year 2 – 2, 5, 10 and 11 times tables
- Year 3 – revise Year 2 tables with addition to 3, 4, 6, 8, 9 times tables
- Year 4 – 7 and 12 times tables plus consolidate all other times tables.

Times Tables knowledge is further promoted in the school through the special and unique '144 Club'. This special club is open to all pupils from Years 2 – 6, with assessments taking place twice termly. Expectations are high in order for pupils to 'join' the club.

Adapted learning

Adapted learning is incorporated into all mathematics lessons and is done in various ways but ensuring that all pupils are able to meet the lesson objective:

- Setting challenging age-related knowledge, reasoning and problem solving tasks based on accurate assessment of pupils' prior skills, knowledge and understanding.
- Timely adult support and intervention.
- A range of resources to support all stages of learning within the class.
- Intervention programmes.

STEM

We aim to provide a range of different types of mathematic learning opportunities and promote open-ended STEM questioning, where pupils decide how to try to find and explain their answers.

Resources

The school recognises the importance of using high quality to support learning in mathematics, particularly concrete manipulatives that support children to grasp concepts.

The Subject Leader is responsible for selecting, building and maintaining resources within budgetary limits. These decisions will be made in conjunction with the Headteacher and will reflect the state of the subject as per its evaluation and review.

Teaching Assistants

TAs are used to support pupils so that every child can play a full part in Maths lessons. The role of the teaching assistant will vary depending on the needs of the class and the content of the lesson. This will be outlined in the planning of each lesson.

Whole School Principles and Strategies for the Teaching of Maths

The school is committed to high standards by ensuring the following are in place:

- Direct teaching and interactive oral work with the whole class and groups;
- An emphasis on mental calculation and the teaching of number facts thoroughly before standard written methods are introduced;
- The Headteacher, Deputy Heads and Subject Leader will give advice, support and training where necessary;
- A desire to secure high standards through effective teaching and learning that pervades the whole school;
- Systematic monitoring and review of progress;
- Whole school approach to the professional development of teachers;
- Support staff are used effectively and feel part of the teaching and learning process;
- Parents are kept well informed.

Equal Opportunities

We believe that all our pupils must have equal access to the Maths curriculum regardless of gender, race or ability. We aim to give every pupil the opportunity to experience success in learning and to achieve as high a standard as possible. We aim to match the tasks and resources; the differing styles of learning, and the differing paces of learning to the ability of the child.

For pupils whose attainments fall significantly below the expected levels a greater degree of differentiation will be necessary.

For pupils whose attainments significantly exceed the expected level, teachers will need to plan suitably challenging work.

Pupils with Special Educational Needs

Pupils with SEN may receive extra support from a support teacher or TA. Small-steps ‘targets’ for improvement will be set out in their Individual Education Plans (IEPs) which should relate directly to the Maths Objectives at the appropriate level.

Every child, whatever their needs, should have full entitlement to the same opportunities in Maths and this will be ensured by adaptations of content, organisation or equipment etc.

Marking

Marking in Maths aims to:

- Be encouraging and supportive in the main;
- Include written comments on how to improve;
- Include an extension sum or two to challenge and improve
- Be carried out as a group or individually;
- Be as immediate as possible to provide constructive and useful feedback.

Marking in Maths should be in line with the school’s whole school marking policy.

Homework

Homework is used to support the teaching of Maths through the learning of number bonds and times tables.

Assessment

Formative Assessment

Formative assessment is mostly informal during class or group work, but may also include:

- Short check-ups – i.e. at the end of a unit;
- Tables tests;
- Progress marked off by the child and the teacher against individual targets set which are regularly reviewed.
- Targets at front of book need to be dated and marked off with LO has been achieved.
- Year 4 times table assessments to be taken – government set

Summative Assessment

- This takes place in the form of end-of-term assessment.
- At present Year 2 and Year 6 assess pupils using SATs papers, while all other year groups use the NFER tests for end of term assessment.

Reporting to Parents

Reporting to parents is carried out twice a year during parent-teacher meetings. The first meeting is during Autumn 2 and the following meeting takes place in Spring 2. Written reporting to parents is carried out annually at the end of the summer term.