

KESTON CE PRIMARY

Maths Policy

Date: October 2020

Review: October 2022

The School's Christian Vision

To provide all our children with knowledge, perseverance and the imagination to develop their God given talents, living out Christian values in order to live happy, fulfilling and considerate lives. We uphold the right of every individual to learn, be valued and achieve their full academic potential.

In God's hands we love, learn and grow.

This policy outlines the teaching, organisation and management of mathematics taught and learnt at Keston. The policy is based on the New National Curriculum (Y1-Y6) and the Early Years Foundation Stage Statutory Framework (Reception) which provides detailed guidance for the implementation of mathematics. This ensures continuity and progression in the teaching of mathematics.

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

AIMS

We aim to provide the pupils with a mathematics curriculum, which will produce individuals who are numerate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their mathematical skills to their full potential. We aim to ensure that pupils:

- have a sense of the size of a number and the number system
- know by heart number facts; number bonds, multiplication tables, doubles and halves
- use what they know by heart to figure out numbers mentally
- calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- recognise when it is appropriate to use a calculator and be able to do so effectively
- make sense of number problems and recognise the operations needed to solve them, as well as selecting the most efficient methods to solve them
- explain their methods and reasoning using correct mathematical terms
- judge whether their answers are reasonable and have strategies for checking them.
- suggest suitable units for measuring and make sensible estimates
- explain and make predictions from numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2d and 3d shapes.
- Become fluent in the fundamentals of mathematics 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 simple steps and persevering in seeking solutions.

Delivery

We deliver a daily maths lesson, which may vary in length but will usually last for about 50 minutes at Key Stage 1 and one hour in K.S.2. Whenever it is appropriate other lessons will be used to develop and apply maths skills: opportunities will be planned for. For instance measuring and data collection in science work.

Maths Lessons follow the White Rose format, combined with a wide variety of other schemes. The teaching of mathematics provides opportunities for group work, paired work, whole class teaching and individual work.

Pupils engage in:

- the development of mental strategies
- written methods

- practical work
- investigational work
- problem solving
- mathematical reasoning
- mathematical discussion using appropriate vocabulary
- consolidation of basic skills and number facts
- the development of a mastery approach to understanding

We recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. Teachers use a variety of published schemes. Children are expected to use the correct mathematical terms and vocabulary in their verbal and written explanations. Mathematics contributes to many subjects and it is important the children are given opportunities to apply and use Mathematics in real contexts.

We endeavour at all times to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

Smart Boards are used to provide excellent opportunities for teachers and children to experience the world of maths in a truly visual and interactive way and there is no doubt that their use enhances both the teaching and learning of maths at Keston.

ASSESSMENT

Assessment is an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teachers to assess all pupils in their class and record their progress. Assessments tasks are closely linked to the Key Performance Indicators (KPI) and to Target Tracker (whole school Assessment package). Accurate assessment allows us to identify learning priorities and plan relevant motivating experiences thus benefiting the pupils and ensuring progress. Information for assessment will be gathered in various ways including talking to the children, observing their work, marking their work, etc.

Daily assessments are made and plans annotated as appropriate, recording by exception, or assessments are made on the Teaching Assistant's Learning Objective Assessment sheet. These assessments impact upon the next day's objectives.

Target Tracker is used to plan and record children's on-going attainment. Depending on the evaluation, changes may need to be made to subsequent plans.

White Rose tests are used to aid teacher assessment, which feed into the end of term assessments of individual children which are recorded on a grid in the PPR folders.

At the end of the year

Pupils sit Puma (Rising Stars) tests and this information, combined with ongoing teacher assessments. Assessments are recorded on Target Tracker and progress is analysed. This analysis also feeds into provision planning for identified children.

More formal/summative assessments are carried out as follows:

Reception; Follow the Early Years Outcomes and at the end of the year the Early Years Profile is completed for all children.

Year 2 and Year 6; Children are assessed through the National SATS. Year 2 through teacher assessment and Year 6 through SATS tests and teacher assessments.

Years 1,2,3,4 and 5 .Children sit White Rose tests at the end of units and at the end of each term and Y6 sit past SAT tests.

Target Setting

Targets are discussed with the children so they are aware of their personal learning goals and shared with parents so that they can most effectively support their child at home. These are reviewed regularly and the results shared with pupils and parents/guardians.

At the end of each year, teachers look at children's attainment and based on this information and the child's rate of progress, they predict the progress each child will make at the end of the next academic year.

In October/ November of Year 5 assessments are reviewed and discussed with the Class Teacher, Maths Subject Leader and the Assessment Leader. These predictions are then used to set Y6 school targets in Maths. The current Year 6 targets are also reviewed at this time.

MONITORING

Monitoring raises the overall quality of teaching and learning. The SLT will monitor the quality of teaching and learning as part of the schools Self-Evaluation Policy. Monitoring includes: Scrutiny of plans, lesson observations, evaluation of data (including Target Tracker, test scores and progress grids), talking to children, staff and parents, moderation of children's maths work. The Subject Leader analyses data every term and meets with class teachers to discuss individual pupil progress and intervention programs. The Subject Leader tracks individual pupils and vulnerable groups and discusses progress and provision with class teachers every term. The teachers also discuss this information in Pupil Progress Review meetings termly, with the Assessment Leader.

REPORTING TO PARENTS

This is carried out through parent consultation meetings in the Autumn and Spring Terms, a written report in the Autumn and Spring Term of attainment and in year progress and an annual written report. Parents are given teacher assessments as well as any SATs test results. Parents are invited to communicate through a variety of ways: homework diary, e-mail, phone calls, written note, pre-arranged meetings, Wednesday consultation period 3.20-3.50.

Workshops have been carried out every two years across the school. Booklets on the 4 operations have been written and sent to all families. Parents also have a Maths Reference Book.

EQUAL OPPORTUNITIES

We recognise that our pupils bring with them a wide variety of behaviours influenced by life experiences outside school. We aim to respond to each case professionally, objectively and compassionately. We are sensitive when working with children and families with specific needs and experiences and we continuously seek ways to promote successful partnerships. The basis of differentiation will vary dependant on the needs of each case but we will take into account the views of parents, staff and external agencies together with any statement of special educational need or Education, Health and Care Plan. We will also ensure compliance with the Trust's equality policy taking into account pupils with protected characteristics and making reasonable adjustments for pupils with a disability within the meaning of the Equality Act 2010. This policy should be read in conjunction with the Trust's Equality Policy <https://www.aquinastrust.org/about/policies>.

We incorporate mathematics into a wide range of cross-curricular subjects and seek to take advantage of multicultural aspects of mathematics e.g. Islamic patterns in RE. All children have equal access to the curriculum regardless of their race or gender. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups.

Class teachers are responsible for challenging more able pupils and this is monitored by the SLT.

Intervention programs enable the school to meet the needs of individual and specific groups of pupils, as identified on a termly basis by the class teacher and SLT.

We are aware of the specific needs of children with English as an additional language (EAL). We will make use of new guidelines as they become available (refer to the equal opportunities policy).

RESOURCES

ICT will be used in various ways to support teaching and learning. It includes computers, calculators, smartboards, and audio visual aids. They will however only be used when it is the most efficient and effective way of meeting the learning objective. Resources are within each classroom. Resources for intervention programmes are stored centrally in the dome. Any resources specifically required are to be sourced through the Mathematics Leader. A comprehensive list of school resources is kept on the school system and is available for use by teachers.

ROLE OF SUBJECT LEADER

The mathematics subject leader is responsible for co-ordinating mathematics through the school. This includes:

- ensuring continuity and progression from year group to year group
- providing all members of staff with guidelines and a scheme of work to show how aims are to be achieved and how all aspects of mathematics are to be taught
- advising on CPD to staff where appropriate. This will be in line with the needs identified in the S.I.P and within the confines of the school budget
- advising and supporting colleagues in the implementation and assessment
- assisting with requisition and maintenance of resources required for the teaching of mathematics, within the confines of the school budget

ROLE OF CLASS TEACHER

- to ensure progression in the acquisition of mathematical skills with due regard to the New National Curriculum for mathematics
- to develop and update skills, knowledge and understanding of mathematics
- to identify INSET needs in mathematics and take part in CPD
- to keep appropriate on-going records
- to plan effectively for mathematics, liaising with the maths Subject Leader when necessary.
- to set relevant homework, in line with the school homework policy
- to inform parents of pupils' progress, achievements and attainment

PARENTAL INVOLVEMENT-At Keston we encourage parents to be involved by:

- inviting them into school twice yearly to discuss the progress of their child
- inviting them into school in the summer term to discuss the yearly report
- inviting them to curriculum evenings or circulating information via half termly newsletters when significant changes have been/are made to the mathematics curriculum
- inviting parents of Year 6 pupils to a meeting in the spring term on supporting their children with SATs
- encouraging parents to help in classrooms
- holding workshops for parents focusing on areas of mathematics
- circulating 'TARGET' leaflets outlining key objectives for the year and indicating which targets children will be working on are given to parents at the beginning of each term
- circulating method booklets for + - - and x
- strongly encouraging them to involve their children in everyday mathematical activities at home
- Informing them of their child's homework activities highlighted in the homework policy

Data Protection Legislation

As a result of the Trust's statutory responsibility, the Trust will receive personal data, some of which will be sensitive personal data. The Trust processes personal data in accordance with the data protection principles embodied in the General Data Protection Regulations (GDPR) and the Data Protection Act 2018 (DPA). The Trust complies with the requirements of the data protection legislation as detailed in the Trust data protection Policy.

All staff are aware of the principles of data protection and will not process personal data unless necessary. The Trust safeguards the personal data it collects through the operation of the Trust's data protection policy and processes and the IT policy. In addition, the Trust and the relevant academy has taken steps to ensure that all its contracts that process data have the GDPR compliant provisions.