KDPS Maths Policy

Vision Statement

At KDPS, we believe that Maths is an essential tool in understanding the world around us. The basic skills of mathematics are vital for the life opportunities of our children. Our aim is for all children to think mathematically, enabling them to reason, solve problems and assess risk in a range of contexts. At KDPS, our Mathematics Mastery curriculum has been developed to ensure every child can achieve excellence in mathematics. Children can experience a sense of awe and wonder as they solve a problem for the first time, discover different solutions and make links between different areas of mathematics. It provides pupils with a deep understanding of the subject through a concrete, pictorial and abstract approach. This ensures pupils fully understand what they are learning

Intent

Aims

- To create an inclusive culture of achievement, high standards and high expectations
- To promote the spiritual, moral, social and cultural development of all of our children.
- To create a stimulating school environment where children feel valued and safe. Bullying is not tolerated.
- To enable all children to use language and mathematics effectively.
- To ensure that all children have equal access to effective teaching and learning in all areas of a rich, broad, balanced curriculum.
- To develop sensitivity, friendliness, courtesy and tolerance towards others.
- To help children develop lively, enquiring minds, the ability to question and discuss rationally and to acquire knowledge, skills and understanding relevant to a fast changing world.
- To be a school dedicated to self-evaluation, ongoing review and continuous improvement.
- To work in partnership with parents/carers and our immediate and wider community for the greater benefit of all children's education.
- To empower every child to fulfil his/her potential.
- Children learn best within a culture of high standards and high expectations

Objectives

- To design a curriculum with appropriate subject knowledge, skills and understanding in Number, Algebra, Ratio, Measurement, Geometry and Statistics as set out in the National Curriculum so that children can know more, remember more and understand more to help them reach and exceed their potential at King David Primary School and beyond.
- To provide opportunities across all curricular areas for the development and application of Mathematic skills to help all pupils know more, remember more and understand more. To design a wider curriculum that provides regular opportunities for pupils to use and apply the knowledge and skills they have acquired from the Mathematics Curriculum.

Implementation

Organisation

We make sure that children learn additional skills, knowledge and understanding and enhance our curriculum as and when necessary.

The skills acquired in the maths lesson are applied across the curriculum. Due to missed learning at the end of the 2019-2020 academic year, geometry and measures from the previous year may need to be taught through the wider curriculum and current year group objectives will be reinforced once taught through the wider curriculum. This will be evident on wider curriculum and maths medium term plans.

Curriculum

National Curriculum Programme of Study.

We use Whiterose but also follow schemes of work suggested by the Maths Hub. The National Curriculum forms the foundation of our curriculum. · Maths Hub is used as the spine for delivery which we hope enables children to form a confident attitude towards mathematics. They will use arithmetic and timetables fluently and make connections in order to solve real life problems. They will recognise that Mathematics is essential for everyday life and make at least good progress in Mathematics from their last point of statutory assessment or from their starting point in Nursery. Children will use their Mathematics skills as a key tool in helping them to learn, and as a result, know more, remember more and understand creative and engaging. We intend for our pupils to be able to apply their mathematical knowledge to science and other subjects. We want children to realise that mathematics has been developed over centuries, providing the solution to some of history's most intriguing problems. We want them to know that it is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. As our pupils progress, we intend for our pupils to be able to understand the world, have the ability to reason mathematically, have an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. Maths Hub ensures consistent coverage, and provides real life opportunities for pupils to make connections and apply their mathematical knowledge.

EYFS

Maths is taught on a daily basis following the EYFS framework. · In Foundation Stage, pupil fluency is developed by using a visual, practical base to develop conceptual understanding and recall. Pupil's mathematical reasoning is developed through the use of concrete objects and spoken language to explain and justify. Opportunities arise through teacher directed tasks and child initiated play. They are also developed through daily routines and all areas of learning.

KS1

Daily mathematics lessons follow the Teaching for Mastery in Maths approach. All concepts are taught with planned microscopic steps, using the concrete-pictoral-abstract method. The lesson consists of teacher-led input, opportunities for learning and practising new skills, (which may be in groups, pairs or as individuals), whole-class interactive activities, time for reflection and discussion, and time to think about next steps. There is an emphasis on Number and Place value and using recall of facts and strategies. Children are encouraged to use fluent recall of number facts and calculations and to identify patterns. The whole class progress together so all children are challenged and able to access all types of activities. Children are in mixed ability groups with an emphasis on achieving deep understanding of a concept before moving on to the next area of learning. Teachers and LSA's model the mathematics, provide carefully chosen resources, question and challenge the children. In all lessons there are opportunities for independent learning when Teachers and LSA staff will identify and correct any misconceptions.

KS2

Daily mathematics lessons follow the Teaching for Mastery in Maths approach. All concepts are taught with planned microscopic steps, using the concrete-pictoral-abstract method. The lesson consists of teacher-led input, opportunities for learning and practising new skills, (which may be in groups, pairs or as individuals), whole-class interactive activities, time for reflection and discussion, and time to think about next steps. There is an emphasis on Number and Place value and using recall of facts and strategies. Children are encouraged to use fluent recall of number facts and calculations and to identify patterns. The whole class progress together so all children are challenged and able to access all types of activities. Children are in mixed ability groups with an emphasis on achieving deep understanding of a concept before moving on to the next area of learning. Teachers and LSA's model the mathematics, provide carefully chosen resources, question and challenge the children. In all lessons there are opportunities for independent learning when Teachers and LSA staff will identify and correct any misconceptions.

Inclusion and Adaptive Teaching

When planning and teaching the curriculum, we have due regard to the following principles:

- Setting suitable learning challenges

We give every child the opportunity to experience success in learning and to achieve as a high a standard as possible. The National Curriculum Programmes of Study set out what each child should be taught at each Key Stage, but Year Groups/teachers teach the knowledge, skills and understanding in ways that suit individual children's abilities. This may mean teaching knowledge, skills and understanding from earlier Key Stages, so that individual children can make progress and show what they can achieve.

For children whose attainments fall significantly below the expected levels at a particular Key Stage, a much greater degree of differentiation will be necessary. In these circumstances, it may be necessary to use the contents of the Programmes of Study as a resource or to provide a context in planning learning appropriate to the age and requirements of the child.

For children whose attainments significantly exceed the expected level of attainment within one or more subjects within a particular Key Stage, we plan suitably challenging work. We plan further differentiation by extending the breadth and depth of study within individual subjects, or by planning work which draws on the content of different subjects.

Spiritual, Moral, Social and Cultural Development

Impact

Progression and Continuity

Throughout school, children's understandings of concepts should be revisited and built upon. The KDPS Maths progression map provides a structure in which this can take place. Teachers need to use this to inform their planning to ensure continuity. I expect to see children making at least good progress in Mathematics from their last point of statutory assessment or from their starting point in Nursery. Children will use their Mathematics knowledge and skills, in all curriculum areas, to enable them to know more, remember more and understand more. Children will recognise the importance of Mathematics as a facilitating subject to enable them to access other areas of learning and operate successfully in everyday life both now and in the future.

Progress and Achievement

By the end of the Reception year an Early Years Foundation Stage Profile will be completed for each child. This sums up their progress and learning needs at the end of the Early Years Foundation Stage. The Early Years Foundation Stage Profile is based on ongoing observations and assessments over all seven areas of learning within the Early Years Foundation Stage. Profiles will be used as part of our annual report to parents. The school will submit numerical results to the LA as they are required and as statutory assessment at the end of the Early Years Foundation Stage.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in NC programme of study for Maths:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1017683/Maths_guidance_KS_1_and_2.pdf

Assessment and Recording

At KDPS we recognise the importance of assessments in Maths. Children and teachers need to know how well they are doing and what they need to do to improve.

Key assessments are:

- day to day
- periodic
- transitional

These are used to inform teaching and learning in a continuous cycle of planning, teaching and assessment.

Day to day assessments are an informal part of every lesson and enable us to monitor children's learning and progress. Marking should be kept up to date and marked in accordance with the lesson objective.

Periodic assessments take place through evidence collected and linked to the key objectives that have been covered during the half term.

Transitional assessments take place towards the end of the school year to assess and review pupils' overall progress and attainment. Teachers also draw upon Balance, their class record of attainment against key objectives and supplementary notes and knowledge about children to produce a summative record. Accurate information is then reported to parents and the child's next teacher.

Monitoring

Maths teaching needs to be monitored across the school in order to ensure that it is consistent and progressive for the children. In order to do this, a number of tools will be used.

- Planning scrutiny
- Book scrutiny
- Lesson observations
- Pupil voice
- Staff voice

Any form of monitoring will take into consideration the well-being of all involved. The main aim of monitoring is to ensure the best possible Maths education for the children of KDPS.

Role of the Subject Leader

The role of the subject leader is to follow through with the aims and objectives of this policy and ensure that children get better at Maths – learning more and remembering more. The action plan plays a role in this, ensuring that the school has everything in place to support staff and pupils achieve their best.

Roles & Responsibilities

- To maintain a subject leader file
- To create, follow and re-evaluate an action plan relevant to KDPS
- To ensure KDPS Maths curriculum is consistent and is being followed in each year group
- To monitor the teaching and learning within Maths fairly to ensure children are making
- progress
- To support and signpost CPD opportunities to support the teaching of Maths and general subject knowledge

Resources

Doodle Maths subscription Year 1 – 4

NCETM Website

White Rose Primary Resources

Twinkl Subscription

Power Maths Text Books and Practise Books for each term.

Maths Cupboard – Located in Mandy Gruber's classroom.

Health and Safety

Policy Author: Michelle Epstein

Policy Agreed: 09.12.21

Policy Renewal Date: 09.12.22