DANE ROYD SCHOOL

Review frequency:

Approval by: Standards Committee

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Aims which guide our policies and practice

As a school, we seek to promote shared moral and ethical values to unite both local and global interests which enable children to become global citizens. Our agreed school aims are:

- *To create a happy and stimulating learning environment, in which each child will develop to their full potential, thereby achieving high educational standards.*
- *To develop self-awareness, self-respect and tolerance of others by developing an understanding of the world in which they live.*
- *To appreciate human achievements and aspirations; develop aesthetic sensitivity and appreciation; physical ability and co-ordination and a concern for the safety of themselves and others.*
- *To prepare children to live and work with others, enabling them to be responsible and caring members of the community.*
- *To give children, at the end of their period of primary education, an appetite for acquiring further knowledge, experience and skills, so ensuring they are prepared for the challenges of the next stage in their education.*

We ensure that all of our policies and practices are guided by these aims and we seek to ensure that they are at the forefront of all that we do.

Maths

Intent

At Dane Royd Junior and Infant School, we want children to have all the skills necessary to become contributing members in an increasingly globalized world. Fundamental to this, is having the ability to apply maths learnt in school both confidently and practically. To this end, we believe our maths curriculum should engage pupils and allow for as much real-life application as possible, both within and outside of the classroom.

As children progress through the maths curriculum at Dane Royd, we want them to build on and consolidate the skills they have learned in previous lessons, terms and year groups, exploring and discovering links to wider maths topics and the curriculum as a whole. Teachers are encouraged to find as many real-life links as possible and incorporate them in maths lessons and elsewhere.

It is our intention that children will become increasingly fluent with number and learn to apply this to a variety of reasoning and problem-solving questions and scenarios.

Implementation

To support us with our intent, we expect teachers to think carefully about the topics they teach and incorporate maths into as much of the curriculum as possible. Thereby, forging links for children to see the real-life application. We follow the White Rose scheme of work as a basis for our maths lessons. We then use a number of resources to support the day to day teaching of mathematics.

Procedures and practice

2. Roles and responsibilities

The Role of the Maths Co-ordinator is:

- Taking the lead in the development, evaluation and amendment of schemes of work as and when necessary
- Acting as a consultant to colleagues on resources, visits, visitors, curriculum changes, classroom teaching and learning ideas
- Monitoring and evaluating pupils' work, pupils' views about the subject, displays and teachers' planning
- Auditing resources and ordering resources when needed
- Keeping up to date with developments in maths and disseminating information to the rest of the teaching staff
- Attending relevant in-service training and prompting others about relevant training
- Leading staff meetings where appropriate

3. Aspects

Equal Opportunities

- We plan our classroom activities to challenge and involve all pupils appropriately, according to age and capability, ethnic diversity, gender and language background
- We are aware of different learning styles and the need to allow pupils the opportunity to be able to work in their preferred learning styles for some of the time, including; art, drama, role play, multi-media and music.

Differentiation

At our school we teach maths to all children, whatever their ability. Maths forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our maths teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning objectives and responding to each child's different needs. Assessment against the National Curriculum and our own progression maps allow us to consider each child's attainment and progress against expected age related expectations. We use a range of strategies to support pupils including: 1:1 teaching, small group intervention, differentiated work, use of more manipulatives to support learning etc

For our gifted and talented pupils we will expect:

- Teachers to provide teaching and learning experiences that encourage pupils to think creatively, this may involve open-ended question tasks where children do not necessarily find an answer
- A greater requirement for technical vocabulary
- A deeper knowledge
- Work collaboratively to solve problems without the aid of the teacher

Health and safety:

Any maths visits/fieldwork/activities must follow the schools Health and Safety policy and risk assessment procedures. Teachers are required to complete a full risk assessment using the Evolve Website. These must be then passed to the Maths Co-Ordinator, the Educational Visit Officer and the Head-teacher, who will present the risk assessments to Governors, who will then sign the visit off.

Planning:

Long Term Overview

2023/2024	Autumn	Spring	Summer
Upper Foundation	Getting to know you Match, sort and compare Talk about measures and patterns It's me 1,2,3 Circles and triangles 1,2,3,4,5 Shapes with 4 sides	Alive in 5! Mass and capacity Growing 6,7,8 Length, height and time Building 9 & 10 Explore 3-D shapes	To 20 and beyond How many now? Manipulate, compose and decompose Sharing and grouping Visualise, build and map Make connections Consolidation
Year 1	Place Value within 10 Addition & Subtraction within 10 Shape Consolidation	Place Value within 20 Addition & Subtraction within 20 Place Value within 50 Length and Height Mass and Volume	Multiplication and Division Fractions Position and Direction Place Value within 100 Money Time Consolidation
Year 2	Place Value Addition & Subtraction Shape	Money Multiplication and Division Length and Height Mass, Capacity and Temperature	Fractions Time Statistics Position and Direction Consolidation
Year 3	Place Value Addition and Subtraction Multiplication and Division A	Multiplication and Division B Length and Perimeter Fractions A Mass and Capacity	Fractions B Money Time Shape Statistics Consolidation
Year 4	Place Value Addition and Subtraction Area Multiplication and Division A Consolidation	Multiplication and Division B Length and Perimeter Fractions Decimals A	Decimals B Money Time Consolidation Shape Statistics Position and Direction
Year 5	Place Value Addition and Subtraction Multiplication and Division A Fractions A	Multiplication and Division B Fractions B Decimals and Percentages Perimeter and Area Statistics	Shape Position and Direction Decimals Negative Numbers Converting Units Volume
Year 6	Place Value Addition, Subtraction, Multiplication and Division Fractions A Fractions B Converting Units	Ratio Algebra Decimals Fractions, Decimals and Percentages Area, Perimeter and Volume Statistics	Shape Position and Direction Themed projects, consolidation and problem solving

Medium Term Plans

We follow the small steps of progression within each block as medium-term plans and then complete an end of block assessment at the end of the block.

Progression Map

A copy of the White Rose Maths progression map can be found on the school website for Nursery to Year 6.

Teaching:

The teaching of all mathematical concepts should follow the sequence of concert, pictorial, abstract. This will give children the support they need to become sound in their understanding of concepts and ensure that a deeper understanding of each is gained.

<u>Foundation Stage</u>

Maths in the Foundation Stage is taught under the umbrella of ''Mathematics'' and is classed as a Specific Area. This area is then split into two further areas ''Number'' and ''Numerical Patterns''. The children are supported in developing the knowledge, skills and understanding that helps them to make. Children in UFS follow the White Rose Maths Scheme and use Master the Curriculum resources to support this.

<u>Key Stage 1</u>

The principal focus of Mathematics teaching in Key Stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four

operations, including with practical resources [for example, concrete objects and measuring tools]. There should be a focus on using concrete, abstract and pictorial representations to help with the fluency of Maths.
At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.
Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.
All children in Key Stage 1 follow the White Rose Maths Scheme and for children who are working Pre-Key Stage then they access the Wakefield Progression Small steps.

Key Stage 2

The principal focus of Mathematics teaching in Lower Key Stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

The principal focus of Mathematics teaching in Upper Key Stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

All children in Key Stage Two follow the White Rose Maths Scheme.

Organisation:

Homework/parent partnership:

Maths homework may be set by teachers to either prepare for a lesson or as part of consolidation work from a topic lesson.

Children will be asked to practice on numbots/timetables rock stars weekly.

Resources:

The school has a number of online subscriptions to support the planning/teaching/learning in mathematics including: Primary Stars, Twinkl, Timestable Rock Stars, White Rose Maths premium and Master the Curriculum.

An audit of maths resources is carried out each year by the maths subject leader and they are replaced/renewed when necessary.

The school has a number of textbooks that can be used to support the planning/teaching/learning in maths including: Target Maths and CPG.

The school has a number of assessment resources to support this area including: practice SATs papers for Year 2 and 6 and White Rose Maths end of term assessments for Years 1,3,4 and 5.

Assessment:

- **Recording of Maths**

Maths will be recorded in maths books or White Rose Maths booklets for Key Stage 1. Morning work should be recorded in children's normal maths book in Key Stage Two and morning work books in Key Stage 1.
Pictures can be used to capture evidence of children's work and as maths will take place across the curriculum any subject book containing maths can be used to demonstrate children's attainment

- **Assessment**

Children's progress will be measured through regular end of block assessments and end of term assessments. Year 4 and Year 6 all have national statutory assessments that take place in their year group and Year 2 will complete optional SATs.

- **Marking**

Marking should be as instantaneous as possible and take place within the lesson where possible. This allows teachers to support children instantly or put measures in place for same day interventions if possible. It also allows the teacher to liaise with parents at the end of the day and communicate potential problems.

Marking of maths should happen in line with the schools marking policy.

Monitoring and evaluation:

Maths will be monitored throughout the school by the maths Co-ordinator who will also be responsible for gathering samples of curriculum work.

The Maths Co-ordinator will also monitor maths books and planning to ensure that the Programmes of Study are being effectively taught and match the needs and abilities of the pupils.

Lessons ideally will also be monitored to help promote quality of learning and standards of achievement maths.

Concluding notes

Monitoring and review:

This policy will be reviewed in September 2024; however a review will commence before this proposed date if any national changes occur.

Other documents and appendices:

National Curriculum:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335158/PRIMARY_national_curriculum_-_Mathematics_220714.pdf

Teaching mathematics in Primary School:
https://www.gov.uk/government/publications/teaching-mathematics-in-primary-schools

Maths Mastery:

White Rose Maths:
https://resources.whiterosemaths.com/

Testbase:
https://www.testbase.co.uk/

Master the curriculum:
https://masterthecurriculum.co.uk/