Caldecote Primary School

Mathematics Policy

July 2020

1. Introduction

This policy explains the rationale behind our maths curriculum and its intent. It establishes the structure of our maths teaching and the expectations of all stakeholders in the effective implementation of our maths curriculum. It sets out how we measure the impact of our maths curriculum through our assessment, monitoring and review schedule.

This policy is to be read in conjunction with the Caldecote Maths Curriculum document 2020 and our Calculation Guidance document 2020.

1.1 Aim

At Caldecote, we aim to create independent, confident and resilient mathematicians who are well equipped to apply their knowledge and logic to other school subjects, the wider world and their lives in the future. We will continually revisit and consolidate knowledge to ensure our pupils have a secure and deep understanding and the ability to make connections between mathematical ideas. As Caldecote pupils progress, they will become increasingly fluent in the fundamentals of maths, be able to reason mathematically and be able to solve progressively complex problems.

1.2 Our Maths Curriculum

All teachers follow our Caldecote Primary School Maths Curriculum (2020). Our maths curriculum ensures full National Curriculum (2014) and Early Years Foundation Stage Framework coverage. The approach, structure, organisation and teaching of our maths curriculum has been designed by us, specifically for our pupils, also drawing on philosophies and models from Maths No Problem, White Rose Maths and our Maths Hub.

The Caldecote Primary School Maths Curriculum includes:

- the knowledge and skills to be taught/learned for each year group from YR – Y6
- the calculation methods and strategies that every pupil should acquire during that year
- the criteria to assess knowledge and skills

Pupils' knowledge and skills progressively build up throughout their time at Caldecote to give them confidence and a firm foundation in maths which underpins a growing excellence in other subjects.

2. Teaching and Learning

Maths teaching at Caldeocte is engaging and relevant. We aim to vary resources and activities to make it fun and rewarding for all pupils. We make links to our half termly topics where appropriate to give meaning and to enable pupils to apply their maths skills in different contexts.

The organisation of maths teaching and learning at Caldecote is visually represented in our **Learning Tree** (Appendix 1).

2.1 Daily Core Skills Sessions

The foundations of the learning tree include the core skills of arithmetic and times tables. These are taught across the school in all classes every morning in 15-20 minute focused sessions. These daily sessions allow for knowledge and skills to be continually revisited. This reinforces and consolidates what has previously been taught. We believe that this plays an important role in our pupils becoming fluent in the fundamentals of maths and develops the pupils' ability to recall and apply knowledge rapidly and accurately.

2.2 Daily Maths Lesson

The trunk of the learning tree includes our daily maths lessons. We teach maths mastery in which every lesson at Caldecote is expected to include aspects of problem solving and reasoning. We have the belief that every pupil can achieve. The whole class work on the same learning objective and all children are exposed to the same teaching. Low threshold/high ceiling activities are commonly used to ensure all children can access the learning and achieve. Details about support for pupils with SEND are below (2.4). Maths mastery means acquiring a solid enough understanding of the maths that's been taught before to enable pupils to move on to more advanced material. This means that our aim is that pupils acquire a deep, long-term, secure and adaptable understanding of the subject and are able to apply their mathematical knowledge to science, other curriculum subjects and in their real life. It develops interconnectivity between areas of maths where pupils are able to reason about a concept and fluently move between mathematical ideas.

We use the 'concrete – pictorial – abstract' method to complement our maths mastery teaching. We focus on a progression from concrete resources, to pictorial representations and finally into the numerical abstract to aid our pupils' conceptual understanding. As a result, we see a growth in confidence in all our learners, especially in areas of problem solving and reasoning.

Our maths lessons consist of a variety of whole class, paired, small group and independent work. Groups are typically mixed ability but may occasionally be ability grouped if the need arises. During every lesson, the teacher and teaching assistant (where available) work with a group of pupils providing teaching input, support, live marking and feedback. Groups are rotated to ensure that all pupils are given an equal number of opportunities to work with an adult led group.

As well as the daily revisit of core skills in the arithmetic and times table sessions, our curriculum requires the following areas of maths to be revisited (with progression) at least every term: number and place value, addition and subtraction, multiplication and division, fractions and decimals. Ensuring continual revision and progression allows for continual development to challenge the most able learners, while also continuing to revisit earlier areas of knowledge for those who may struggle with maths.

2.3 Wider Opportunities

The branches of the learning tree are the wider opportunities we provide pupils to enrich the curriculum. The school annually take part in several maths events such as the Cambridgeshire Maths Challenge and the CB23 Mega Maths event which are targeted towards our more able mathematicians. In school we aim to provide experiences that enhance pupils' learning in maths such as curriculum days and house team activities and competitions.

2.4 How we Support all Pupils to Achieve

Caldecote Primary School maths is fully inclusive and we believe that all pupils are entitled to have access to a broad and balanced maths curriculum. Our mastery approach and programme of revisiting supports pupils who struggle in maths to achieve. Additionally, our live marking approach to feedback aids progress every lesson. Each day, pupils are assessed during the maths lesson and may be identified for 'catch up' during or before the next lesson.

However, for some pupils with special educational needs and disabilities (SEND) additional or different support is needed for them to successfully access the maths curriculum. Pupils with SEND will have a support plan or EHCP which sets out the provision they need, for example small group or 1:1 sessions or pre teaching.

3. Assessment and Reporting

3.1 How we Assess

Assessment in maths is used to inform teaching in a continuous daily, weekly and longer term cycle of planning, teaching and assessment. Observations and assessments are made every lesson and key actions are noted on distance marking sheets. Catch up and pre teaching occur as a result of daily assessments. Teacher's day-to-day lesson planning is informed by this constant checking of pupils understanding.

All pupils are also more formally assessed in maths in line with our assessment schedule every term:

- Maths Reasoning: Assertive Mentoring test
- Arithmetic: White Rose test
- Times Tables: Caldecote Primary School TimesTables test

The results from tests are used in conjunction with teacher assessments.

3.2 How we use Assessment Data

Results from these tests are then used:

- formatively to identify gaps and plan next steps

- summatively to report on progress. The table below shows how the results from the maths tests are used to provide a judgement about where pupils are in terms of age related expectations

Code	Assessment Step
B	Beginning to access year group curriculum
B+	Some objectives secure (up to 50%)
W	Half objectives secure (50% +)
W+	Most objectives secure (75%)
S	All objectives secure
S+	Deeper learning, knowing 'why' and 'how' as well as 'that'; able to use knowledge flexibly and creatively and apply it to new and unfamiliar situations

We use Target Tracker to track maths progress and attainment. We also analyse the data using Matrices which identify pupils falling behind and using our Class Profiles which track attainment against the characteristics of each pupil, for example Summer born, English as an additional language, Pupil Premium etc.

3.3 National Assessments

We carry out the following national tests in line with statutory guidance:

- Reception baseline assessment (includes aspects of maths)
- End of KS1 Reasoning Paper
- End of KS1 Arithmetic Paper
- End of KS2 Arithmetic Paper
- End of KS2 Reasoning Papers X2
- Year 4 online Multiplication Tables Check

3.4 Reporting

We formally report maths attainment, effort and attitudes to learning to parents three times per year. We provide two written termly reports which are shared and discussed at parents' consultations in autumn and spring terms. In summer term we provide an annual written report.

4. Monitoring, Review and Development

Monitoring attainment, the standards of children's work and the quality of teaching in maths is the responsibility of the maths subject leader, who, in turn, reports to the Headteacher. The work of the maths subject leader also involves supporting colleagues with Continuing Professional Development (CPD) in maths and ensuring that the school is informed about current developments in the subject. The maths subject leader creates an action plan which feeds into the school's Raising Achievement Plan (RAP). This

provides a strategic plan and direction for the subject in the school. A named member of the Governing Body oversees the school's strategic plan for maths and regularly meets with the subject leader.

5. Parents and Home Learning

It is essential that the school and parents work in collaboration to support pupils' enjoyment, attainment and progress in maths. All parents sign our home school agreement which sets out the expectations of parents and the school in this relationship.

We strive to keep parents up to date and fully informed about maths teaching and developments in school so they can effectively support learning at home. We use various methods to do this:

- We hold maths information meetings for parents
- We have open mornings during which parents can see maths being taught
- We have a calculation guidance document which is shared on the school website
- Our maths curriculum is shared on the website
- Half termly overviews of maths are shared on the website on class topic webs

We expect parents to encourage pupils to complete maths home learning tasks to consolidate what they have learned, to develop retrieval practise skills and to apply what they have learned in different contexts. We subscribe to online platforms such as Time Tables Rockstars and Mathletics which pupils can access at home and teachers can monitor at school. We also provide a 'menu' of activities each half term which is linked to the class topic. This will include maths focussed tasks giving pupils the opportunity to apply their maths in different subjects and in real life.

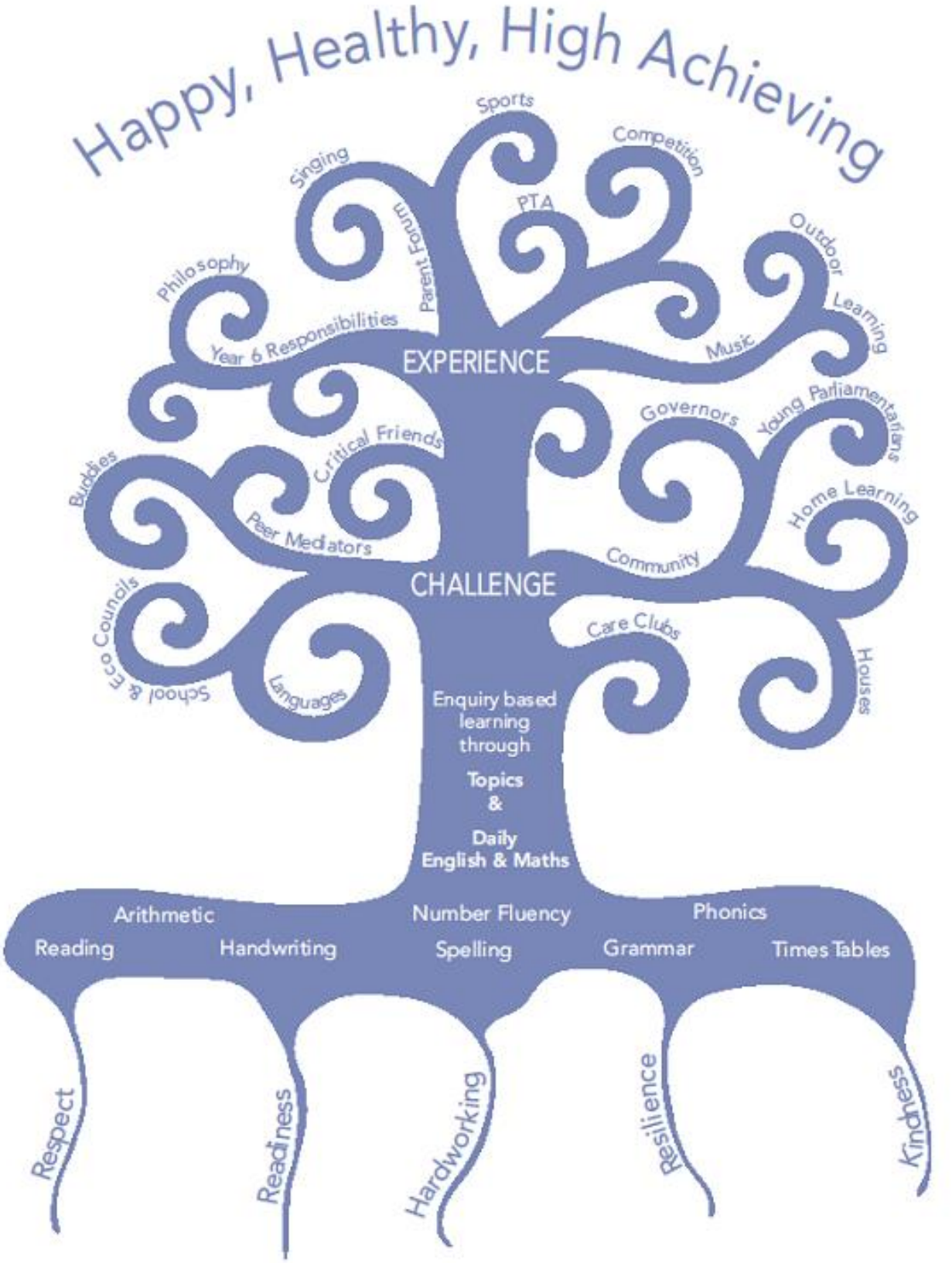
6. Policy Review

The Policy statement will be reviewed in line with the rolling programme of Policy reviews.

Headteacher: …… Date: ……..…

Chair of Governors: …….. Date: ……..

Appendix 1 – Caldecote Learning Tree


Happy, Healthy, High Achieving
Sports
Competition
Singing
PTA
Parent Forum
Outdoor Learning
Philosophy
Year 6 Responsibilities
Music
EXPERIENCE
Governors
Young Parliamentarians
Critical Friends
Buddies
Home Learning
Peer Mediators
Community
CHALLENGE
Eco Councils
School &
Care Clubs
Houses
Languages
Enquiry based learning through
Topics
&
Daily English & Maths
Arithmetic
Number Fluency
Phonics
Reading
Handwriting
Spelling
Grammar
Times Tables
Respect
Readiness
Hardworking
Resilience
Kindness