



CLARE COMMUNITY
— PRIMARY SCHOOL —

Maths Policy

January 2022

SLT

Maths Subject Leader: R.Davies

School Aims

Central to our vision is the belief in the uniqueness of every child, and that everyone has gifts to discover and share with others. We are committed to building brighter futures for our pupils, our local community and the wider world.

We aim to open children's minds to their full potential by building a firm foundation in the basic skills of reading and number as well as giving them opportunities to develop creatively. We want our pupils to be happy and confident, but also caring and tolerant. Above all, we want them to have a thirst for knowledge and a real enthusiasm for life...

Rationale

At Clare Community Primary School, our aim is for all children to enjoy mathematics and have a secure and deep understanding of fundamental mathematical concepts and procedures when they leave us to go to secondary school. Children are encouraged to become enthusiastic mathematicians by developing their skills, knowledge and understanding through practical experiences which have relevance and purpose in everyday situations.

It is essential that children develop their numeracy skills in order to become lifelong learners; they should be able to apply their fluency, problem-solving and reasoning skills in different situations across the curriculum and in daily life outside school.

Aims and Objectives

- To become fluent in the fundamentals of Mathematics through varied and frequent practice of increasingly complex problems over time.
- To develop the ability to recall and apply known facts rapidly and accurately.
- To become problem solvers, who can reason, think logically, work systematically and apply their knowledge of mathematics in a range of contexts.
- To develop mathematical language through speaking and listening, practical activities and by recording work accurately.
- To become independent learners and to work co-operatively with others.

Teaching and Learning

We believe a strong mathematics curriculum should involve taking the most effective elements of a Mastery approach to mathematics (such as the CPA approach to support conceptual understanding), and combine them with good practice of challenging and supporting every child at their own level of knowledge and understanding. The rationale behind our approach to teaching mathematics lies within the NCETM Maths Hub Programme as well as the 2014 National Curriculum, which states:

- The expectation is that most pupils will move through the programmes of study at broadly the same pace.

- 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.

Teachers and support staff at Clare Community Primary School are involved in ongoing CPD opportunities to keep abreast of current pedagogy and good practice, using a variety of learning and teaching styles in Mathematics, along with a range of strategies that cater for different types of learners. Lessons are personalised to challenge learners of different abilities: differentiated group work, independent work, working in pairs, and as a whole class.

Teaching assistants are deployed effectively to support and extend children's learning as appropriate. This may involve supporting children in small group work, 1-to-1 support in class, pre or post teaching for Less Able or SEN children, targeted programmes of intervention, etc.

See below '[Maths Expectations Jan 2022](#)' for expectations of the following criteria:

- Mental Maths and Fluency
- Times Tables Practice / Tests
- Times Tables Rock Stars / NumBots
- Lesson Plans (Long, Medium Term & Daily)
- Lesson content and delivery
- Marking and Feedback
- Targeted Children
- Classroom Displays and Resources
- Reasoning and Investigations
- Home Learning

Planning and Assessment

For expectations of Long & Medium Term and Daily planning, see below '[Maths Expectations Jan 2022](#)'

Tracking Pupil Progress – see '[Assessment Overview](#)' for current academic year:

- Teachers in Key Stage 1 and 2 will be asked to make a judgement in Autumn, Spring and Summer as to whether a child is **Working Below Year Group (WBY)**, **Working Towards (WT)**, at the **Expected Standard (EXS)** or **Working at Greater Depth (GD)** in their age-related expectations in Maths, Reading, and Writing; (See **separate guidance for SEND pupils**)
- This data will be collected in by the Leadership team and subject leaders and analysed by them;
- It will form the basis of discussions at Pupil Progress meetings, where test scores, standardisation and work scrutinies will then provide more detail as to whether children are maintaining progress or falling behind.

Calculation Methods

At Clare Community Primary School, we are committed to ensuring pupils have a consistent and smooth progression of learning in calculations across the school, using the concrete -> pictorial -> abstract steps of the 'mastery' approach to mathematics.

For details, see '[CCPS Calculation Policy 2022](#)'

Maths and Other Areas of the Curriculum

Our expectations are that the explicit learning in Maths lessons will feed directly into learning in certain other areas of the wider curriculum. We endeavour to make links to taught mathematical concepts wherever possible throughout the school day, and opportunities to revisit Maths learning in other subject areas are created, wherever appropriate and meaningful.

This might involve, for example, counting on a Timeline in Year 1 and 2 as part of a history topic; creating bar charts to measure rainfall in India during Year 3 and 4; understanding percentages in Year 6 when learning about populations in WWII.

Maths Home Learning

For expectations of Maths work to be sent home, see below '[Maths Expectations Jan 2022](#)' and '[2019 CCPS - Home Learning](#)' policy

Monitoring

The teaching of Mathematics is monitored through:

- Learning Walks and Lesson observations
- Scrutiny of work and conversations with children
- In-school and external moderation
- Tracking children's progress through Pupil Progress Meetings

Inclusion

All children have an equal right to access to the Mathematics curriculum. Our school strives to meet the needs of pupils with special educational needs, with disabilities, those who are very able, and those learning English as an additional language.

Further guidance can be found in the school's '[CCPS SEND Policy 2019](#)'

Home/School Communication

Copies of the Calculation Policy are available on our school website, to support parents and carers with the learning of Mathematics at home.

Opportunities for parents and carers to engage in partnership with the school are created via events such as Maths Cafes and Maths Meetings.

MATHS EXPECTATIONS - JANUARY 2022

Focus	How often and how?
Mental Maths and fluency	<ul style="list-style-type: none"> • Children should have daily opportunities to focus on counting and number fact recall, to help build their <u>fluency</u> skills. • Teaching staff should know the National Curriculum statutory requirements for the years immediately above and below, as well as for their own year group (see also overview 'Maths-non-negotiables-in-grid.pdf'). Examples of mental maths activities might include: <ul style="list-style-type: none"> ○ Exploring number - through use of manipulatives, in play and through children's own experience. ○ Counting – forwards and backwards from different starting numbers; count across tens/hundreds/decimal boundaries; include negative numbers, decimals, fractions, etc. ○ Times Tables – Yr1: counting in steps. Yr2-6: multiplications and inverse divisions. Practise previously learned tables. ○ Number Bonds – yes to 5, 10, 20, but also challenge to 7, 17, 70, 0.7, etc., including related subtractions ○ Mental Calculations and Problem Solving – e.g. missing numbers, pictorial problems.
Times Tables + Practice / Tests	<ul style="list-style-type: none"> • Statutory requirement of Times Tables by Year: EYFS: count in multiples of twos, fives and tens (for children who are 'Exceeding') Year 1: count in multiples of twos, fives and tens Year 2: count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. Multiplication and division facts for the 2, 5 and 10 multiplication tables Year 3: count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Year 4: count in multiples of 6, 7, 9, 25 and 1000. Recall multiplication and division facts for multiplication tables up to 12×12 • Times tables tests are to be delivered and tracked regularly as agreed within Key Stage.
Times Tables Rock Stars / NumBots	<ul style="list-style-type: none"> • At least 1x weekly in school and encourage 2x weekly at home. • Children to be rewarded for progress at class teacher's discretion. • Children to have logins to take home, as well as to access at school.
Lesson Plans	<ul style="list-style-type: none"> • <u>Long term plan:</u> should show name and length of all units to be taught each term, over the course of the whole year (e.g. <i>Autumn Term 1, Weeks 1-2: Place Value</i>). Units should be no longer than 2-3 weeks. A Shape, Space & Measure thread should run concurrently or alternately. • <u>Medium term plan:</u> should show L.O.s to be taught over the course of each week (e.g. <i>Place Value, Week 1. Monday: To compare numbers to 100</i>), and link directly to units shown in long-term plan. • <u>Daily Lesson Plans:</u> should show teacher input; differentiation (including Extension task, Challenge for More Able and simplified tasks for SEN); adult support; any additional resources to be used.
Lesson content and delivery	<ul style="list-style-type: none"> • Lessons and independent activities should offer explicit opportunities for children to practise and develop their fluency,

	<p>problem-solving and reasoning skills. See also 'CCPS Calculation Policy 2022'</p> <ul style="list-style-type: none"> • Children should be introduced to new concepts using the concrete, pictorial, abstract approach to the learning of mathematics. See also 'CCPS Calculation Policy 2022' • Children are not expected to write a daily L.O. but should be able to articulate their learning focus for that lesson. • Children should have Steps To Success, either in the form of clearly modelled work which they can follow, or success criteria on display.
Marking and Feedback	<ul style="list-style-type: none"> • Marking should be timely (during the lesson whenever possible) and meaningful; feedback should refer directly to the L.O. Children are not expected to copy L.O. into their books on a daily basis, but should be able to articulate their learning focus each week. • It is not expected that every book is marked every day: for example, if a general misconception has been identified during marking, it can be addressed as a whole class teaching input the next lesson. • Feedback will sometimes offer children further challenges or ask them to reflect on their learning. This is a good opportunity for them to practise and develop their <u>reasoning</u> skills (e.g. <i>How do you know you're right?</i> or <i>Where did you go wrong?</i>) Responses to be recorded in books as appropriate. • Children should be given time to correct their work and respond to teacher comments on a daily basis where appropriate. • Marking should indicate any adult support given. • In EYFS records and assessments are made on individual Tapestry Journals. Work in books is annotated.
Targeted Children	<ul style="list-style-type: none"> • Teachers and support staff should have a clear understanding of which children are working below and above the expected level, and should address these needs with targeted support (made evident on planning). This applies to identified groups of children as well as to the needs of individuals.
Classroom Displays and Resources	<ul style="list-style-type: none"> • In the dyslexia-friendly classroom, children should be able to access <u>key vocabulary</u>, relevant to the unit being taught, on display in appropriate fonts around the classroom. • Children should also be able to follow displayed resources as modelled examples of calculation and problem-solving, as well as to aid fluency. The displays and working walls should reflect the current objectives. • All children (particularly those with SEND) should have necessary resources available on their tables to support their understanding of whole class teaching and to enable them to work independently (e.g. hundred square, times tables square) • Manipulatives ('concrete' apparatus) should be available in all classes, wherever appropriate, for children to represent and manipulate numbers and concepts physically.
Reasoning and Investigations	<ul style="list-style-type: none"> • Regular opportunities should be created for '<i>low threshold, high ceiling</i>' tasks, to develop children's investigative and reasoning skills. e.g: <ul style="list-style-type: none"> ○ https://nrich.maths.org/

○ <https://www.youcubed.org/>

- Evidence of investigative / reasoning work must be shown in books.

Home Learning

- Maths homework should be relevant to taught L.Os and differentiated in order to support current learning in class.
- Homework should include learning / practising number facts (see above) and the expectation that children participate in TT Rock Stars (see above) regularly at home from Year 3 upwards.
- Home Learning should be able to be completed independently by children with minimal assistance from parents - it should reflect your class differentiation with a challenge for More Able children.