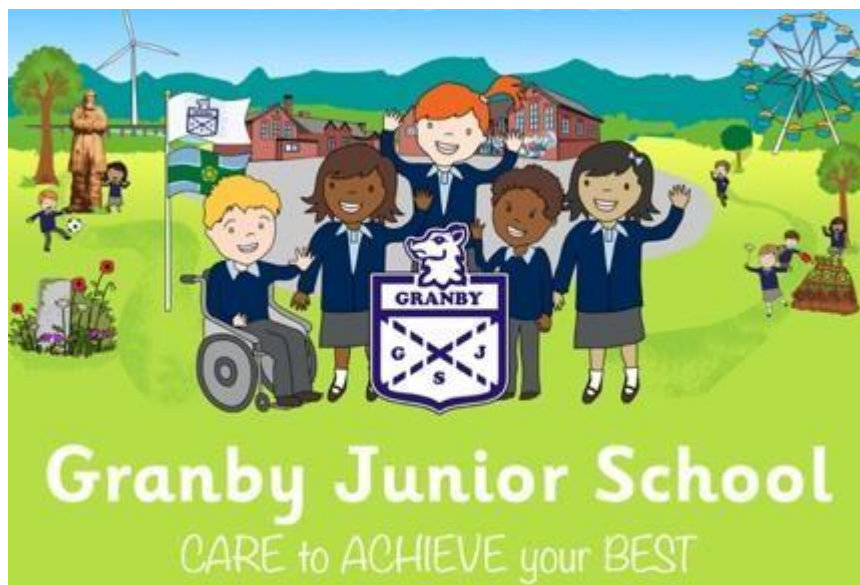


Granby Junior School



Maths Teaching and Learning Policy

Review Date	Approved by	Governor Minute Reference
July 2027		

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1. Introduction

This document is a statement of the aims, principles and strategies for the teaching and learning of maths at Granby Junior School. It sets out how we provide a coherent, ambitious and inclusive maths curriculum that enables pupils to become fluent in the fundamentals of maths, reason mathematically and solve problems with increasing confidence and independence. The policy reflects current curriculum requirements, school priorities and inclusive classroom practice and will be reviewed by the Maths Subject Leader in conjunction with the Senior Leadership Team in September 2027, or earlier if required.

2. Rationale

As a core subject, maths is an essential life skill. At Granby Junior School, maths learning is for every pupil. We provide a broad, balanced and carefully sequenced curriculum that supports pupils to understand maths as a connected, creative and useful subject. We promote positive attitudes by building confidence, celebrating mistakes as part of learning and helping pupils see themselves as capable mathematicians who can apply mathematical knowledge in everyday life, future study and employment.

3. Aims

Maths teaching at Granby will:

- Deliver a broad, balanced and carefully sequenced maths curriculum in line with the National Curriculum for England.
- Develop secure number sense, including recognising patterns and quantities through subitising, particularly in lower Key Stage 2.
- Develop pupils' fluency in number facts, times tables, calculation strategies and mathematical procedures through regular, purposeful practice, including multiplication sticks and daily arithmetic questions.
- Strengthen conceptual understanding through concrete, pictorial and abstract representations.
- Enable pupils to reason mathematically using accurate vocabulary, clear explanations, conjectures, generalisations and justifications.
- Provide regular opportunities for pupils to solve routine and non-routine problems, including multi-step problems and real-life applications.
- Use assessment effectively to identify misconceptions, adapt teaching and provide timely support or challenge.
- Promote equity in maths by challenging stereotypes and ensuring that all pupils have access to ambitious learning.

4. Objectives:

- By the end of Key Stage 2, pupils will have accessed the full mathematics entitlement required by the National Curriculum and will be well prepared for the next stage of education.
- Pupils will recall and apply key number facts, including multiplication tables, fluently and accurately.
- Pupils will use mental and written methods effectively, including secure approaches to the four operations.
- Pupils will work confidently with fractions, decimals and percentages, measure accurately, tell the time, describe 2D and 3D shapes and interpret data using tables, charts and graphs.
- Pupils will solve problems, spot patterns, make connections, estimate, check answers and apply maths in real-life and cross-curricular contexts.
- Pupils will explain and justify their thinking using precise mathematical vocabulary and develop a positive, resilient attitude towards challenge.

5. Planning

Long/medium-term plans

Maths at Granby follows the National Curriculum and is carefully sequenced so pupils build secure understanding over time. Long-term plans prioritise and revisit key areas such as number, calculation and fractions.

Planning is supported by NCETM progression materials, White Rose Maths units, school long-term plans and calculation progression guidance to ensure clear progression across year groups. Teachers use small steps, prior learning checks and assessment information to address gaps and misconceptions.

Yearly plans set out the sequence of maths units and inform medium-term and weekly planning. Lessons include retrieval through “connect back” activities and opportunities for fluency, reasoning and problem-solving.

Short term plans

Teachers plan in year group teams using school progression documents and high-quality resources. Planning supports quality first teaching and adaptive teaching through clear modelling, targeted questioning, scaffolds, practical resources, visual representations, guided practice, additional practice and challenge tasks so all pupils can access learning and make progress.

Planning is flexible and responsive. Teachers adapt learning based on assessment, pupils’ prior knowledge and identified barriers while maintaining ambitious expectations for all pupils.

6. Teaching

The start of the lesson

Lessons begin with a purposeful retrieval, feedback or “connect back” activity. This revisits prior learning, celebrates success, addresses misconceptions and helps pupils make links with new learning. Teachers use this information to adapt teaching so that pupils are ready to move forward confidently.

Warm ups/Starters:

Warm-ups and starters are used to strengthen fluency in number facts, multiplication tables, number bonds and mental strategies. Daily arithmetic questions, multiplication sticks and regular retrieval practice embed familiarity, accuracy and fluency over time. In lower Key Stage 2, subitising is a key strategy for strengthening number sense and helping pupils recognise patterns and quantities efficiently, with Numbots used to support this work.

The main lesson:

The main lesson follows a mastery-informed approach. Pupils usually work towards the same learning objective through carefully sequenced small steps, clear modelling, guided practice, independent application and purposeful questioning. Teachers use concrete resources, pictorial representations and abstract notation to help pupils make connections between mathematical ideas.

Fluency, reasoning and problem-solving are developed within lessons rather than treated as separate elements. Pupils are encouraged to explain their thinking, use mathematical vocabulary accurately, compare methods and representations, spot patterns, investigate possibilities and apply knowledge in unfamiliar and real-life contexts.

Questions and tasks are carefully selected to promote comparison, variation, explanation, justification and generalisation. Pupils are supported to reason using prompts such as “What is the same or different?”, “How do you know?” and “Can you explain your method?” Standard and non-standard examples are used to deepen understanding and address misconceptions.

Support is provided through adaptive teaching, scaffolds, targeted questioning, guided practice and purposeful use of manipulatives. Learning support assistants may support individuals or small groups and contribute to pre-teaching, overlearning or post-teaching where appropriate.

Discrete problem-solving lessons may be taught where a specific strategy or skill needs to be developed, or later in a sequence once pupils have secured the fluency needed to apply their learning confidently.

Plenaries

Plenaries are used flexibly, depending on the pace and flow of the lesson. They may be used to revisit the learning objective, address misconceptions, support self- or peer assessment, apply learning to a real-life problem, celebrate effective strategies or prepare pupils for future learning.

7. Additional resources

Times Table Rockstars

Multiplication tables are taught discretely across the school to ensure fluency and rapid recall. Times Table Rock Stars is used to complement teaching, increase enjoyment in maths and raise the profile of multiplication fluency. Multiplication sticks and daily arithmetic questions are used consistently to embed familiarity, strengthen recall and build fluency over time.

Core maths resources and fluency routines

A range of high-quality resources supports conceptual understanding, fluency, reasoning and problem-solving. These include manipulatives such as place value counters, dienes, Numicon, bead strings, fraction resources, measuring equipment, clocks, shapes, mathematical games and visual representations. Digital resources, textbooks, assessment materials and professional guidance are used alongside teacher expertise. School-specific resources include White Rose Maths, NCETM materials, Times Table Rock Stars, Numbots, multiplication sticks and daily arithmetic questions. Numbots is a key resource for supporting subitising, early number sense and fluency, particularly in lower Key Stage 2. Big Maths is no longer used.

8. The learning environment

Classrooms will have a maths working wall which will display the following

- Current learning, including models and representations linked to the lesson sequence.
- Calculation models linked to the school calculation progression guidance.
- Place value grids and other visual prompts where appropriate.
- Key vocabulary supported by teacher modelling, displays and word banks.
- Pictorial prompts and examples that help pupils explain, reason and make connections.

9. Presentation

Children use one digit per square for the formation of numbers. Children are taught to form their numbers consistently and precisely e.g. four as two separate lines where the pencil is picked up; 6, 8 and 9 formed from the top right hand corner with the pen in contact with the paper for one movement.

10. Maths in the wider curriculum

Mathematical knowledge and skills are developed and reinforced across the curriculum. Pupils are encouraged to use accurate mathematical vocabulary in spoken and written work through teacher modelling, displays, word banks and cross-curricular writing. Skills such as measuring, graph work, data handling, interpreting information, problem-solving and logical reasoning are applied in subjects including science, computing, design technology and geography. Outdoor learning is used where possible, particularly through Year 3 outdoor provision, so pupils can explore measuring, comparing, sorting, pattern spotting, shape work, data collection and problem-solving in meaningful contexts.

11. Inclusion, equality and diversity

Maths teaching at Granby aims to be as inclusive as possible, offering challenge and high expectations of all pupils.

Inclusion.

Every pupil is entitled to experience an ambitious, engaging and inclusive maths curriculum that develops fluency, reasoning and problem-solving. We believe every child can achieve success in maths and that high-quality inclusive teaching enables all pupils to participate, make progress and develop confidence as mathematicians.

Teachers recognise the diverse strengths, experiences and barriers that pupils may bring to mathematical learning, including pupils with SEND, vulnerable pupils, disadvantaged pupils, pupils who have experienced disruption to learning, pupils with social, emotional or mental health needs, pupils learning English as an additional language and those with high prior attainment. Ongoing assessment is used to identify and respond to individual needs through the graduated approach of assess, plan, do and review.

Inclusive maths teaching is rooted in high-quality classroom practice. Lessons are planned so that all pupils access the same ambitious curriculum through adaptive teaching strategies that support learning without reducing challenge. These include explicit modelling, carefully sequenced small steps, concrete, pictorial and abstract representations, mathematical talk, pre-teaching of vocabulary, scaffolded tasks, targeted questioning and purposeful use of manipulatives. Reasonable adjustments are made where appropriate.

Equality

In lessons, children are offered equal opportunities to learn, and a ceiling is not placed on their learning. An adaptive teaching approach is employed to overcome barriers to learning and teaching staff approach lessons with the belief that all children, regardless of need, can achieve having high expectations of all.

Diversity

Our maths curriculum reflects a diverse view of the world and helps pupils understand that maths is used by people from many cultures, communities and backgrounds. Pupils learn that mathematical thinking has developed across different civilisations and continues to shape modern life, technology, science, engineering, finance and the arts. Through lessons, displays, enrichment opportunities and classroom discussion, pupils are introduced to a range of mathematicians and people who use maths in their work. This helps to challenge stereotypes, promote ambition and ensure that all pupils can see themselves as successful mathematicians.

Safeguarding

We create a positive and supportive maths environment where pupils feel confident to have a go, make mistakes and learn from them. Low-stakes activities are used to reduce pressure, build enjoyment and help children develop resilience. Staff model that mistakes are a normal and valuable part of learning, using them to encourage discussion, reasoning and deeper understanding. By promoting the idea that we “embrace the mistake”, pupils are supported to take risks, persevere and recognise that maths is about thinking, explaining and improving, as well as finding answers.

12. Recording pupils' work

Although there are occasions when it is not necessary to record mathematics in a permanent form - during practical work and when using whiteboards for example - on the majority of occasions it is essential that the children do carry out written work using their maths books or on loose pieces of paper; the latter can facilitate possibilities for display so that the children can be proud of what they have achieved. When it isn't recorded in books, it can be photographed and put on SeeSaw or the website. Children are, therefore, taught a variety of methods for recording their work and are encouraged to use the most appropriate and convenient - this includes a consistent approach to the formal methods of calculation for the four basic number operations.

All children are encouraged to work tidily and neatly when recording their actual answers, although jottings are often essential and may take various forms - they are an important learning tool for the children and can also provide valuable evidence for the teacher.

13. Marking and feedback

It is recognised that it is not productive for an adult to always mark in isolation from the children, and nor should it be an onerous task. We value verbal feedback as highly as any written form. Where appropriate (in pure number work for example) the children will be encouraged to self-mark with support and guidance from the teacher and will self-assess all written work with their green pen. Corrections are made in green pen. Children do not copy the correct answer, but must try the calculation again or identify the error in the calculation with a green pen and correct that part.

After lessons, books are marked in line with school's marking and feedback policy. Feedback books are used to identify misconceptions and basic skills errors to be shared at the start of the next day along with praise for achievements. Children are given time to respond to feedback at the start of the next lesson- this may be to make corrections or to complete a task set. See Marking and Feedback Policy for further information.

14. Assessment

Assessment takes place at three connected levels: short-term, medium-term and long-term.

Assessment is used to understand what pupils know, identify misconceptions and inform the next steps in teaching and learning. Evidence from assessment supports responsive teaching, timely feedback, intervention, challenge and curriculum development.

Short-term assessment happens within everyday lessons through questioning, observation, discussion, mini-whiteboard work, pupil explanations, independent tasks, book work and pupil reflection. Low-stakes quizzes, starter activities, daily arithmetic questions, regular arithmetic practice, multiplication sticks, Numbots and subitising activities, particularly in lower Key Stage 2, are used to revisit prior learning, strengthen number facts and support fluency.

Medium-term assessment uses evidence from lessons, end-of-unit tasks, fluency checks, times tables monitoring, arithmetic practice and reasoning/problem-solving work to identify strengths and gaps. Teachers use this information to adapt teaching, plan interventions, revisit key concepts and provide support or challenge.

Long-term assessment takes place across the autumn, spring and summer terms using teacher assessment and standardised assessments.

Year 6 complete statutory assessment tests, while Years 3, 4 and 5 complete Boost Insights PUMA assessments. This information helps track attainment and progress over time and informs future teaching, curriculum development and targeted support.