Grove Street Primary School

MINDS | LEARNING | FUTURES

Every child deserves a Champion

Mathematics Policy

September 2023

Statement of Intent

All children to have a secure long term, deep and adaptable understanding of mathematics which they can apply to a range of contexts.

At Grove Street Primary School, Mathematics is a fundamental part of each day. We believe that Maths teaches us how to make sense of the world around us. We aim to provide children with the skills in order to develop the ability to calculate, to communicate, to reason and to solve problems. This enables children to explore, understand, and appreciate relationshipsand patterns in both number and shape in their everyday life. We wish to promote enjoyment and enthusiasm for learning through practical activity, cross-curricular learning,exploration and discussion.

We aim for all children to:

- become **fluent** in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- be able to **solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios
- **reason mathematically** by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.

Curriculum Implementation

We are passionate about mathematics and our curriculum offer reflects this. Our weekly learning expectations for each Key Stage are:

Key Stage	Weekly Teaching Expectations
EYFS	LL, YN: Daily Maths Meeting YR- 4x Mastering Number sessions and 1x additional Power Maths Session
KS1	Daily Fluency, 4x Mastering Number sessions, Daily Power Maths lessons
KS2	Daily Fluency, Daily Power Maths Lessons Y4, Y5 & Y6 KS2 Mastering Number

Curriculum Planning

All teachers plan from the Power Maths scheme of learning. This scheme is accredited by the DFE and follows a mastery approach. The teaching is broken down into units of study. To ensure to continue our recovery curriculum teachers to continue to pre-teach each unit including teaching specific vocabulary and revisiting teaching tools.

Teachers are able to enhance and adapt the Power Maths planning to suit individual or cohort needs, by utilising other high-quality teaching resources such as; White Rose Maths, NCETM or NRich.

Lessons

As we follow and champion a mastery approach to learning, we teach children in whole class groups. Each lesson follows a structured approach and is broken down into different parts, which are as follows:

Maths Memory	Teachers to revisit previous learning intentions to ensure the children are able to retain previously learned information and continue to apply it successfully to solve problems.
Discover	To provide a practical, real-life problem to arouse curiosity surrounding maths. Questions to tackle a key concept, children to have time to explore, play and discuss possible strategies.
Share	Teacher-led, this interactive section follows the Discover activity and highlights the variety of methods that can be used to solve a single problem.
Think Together	Children to work in groups or pairs to solve problems. Children to have time to discuss their methods and solutions as a class.
Practice	Children to work independently applying their learning from the session to answer questions.
Review	An opportunity to share learning, check understanding and eliminate misconceptions with questions such as 'spot the mistake'.

Mathematical Vocabulary and Oracy

Maths vocabulary should form an integral part of every lesson. Stem sentences should be used where appropriate and teachers will refer to our Vocabulary Progression document, as well as the National Curriculum and the glossary of terms.

During our shared problem-solving teachers follow a five-step approach (right). Children can then apply the mathematical vocabulary to prove their answers.

Step 1: **What-** Children recall what they did.

Step 2: **Explain**- Children offer reasons for what they did. These may or may not be correct. The argument may not hang together coherently; this is the beginning of inductive reasoning.

Step 3: **Convince**- Explain to others that their reasoning is correct.

Step 4: **Justify-** A correct logical argument. A complete chain of reasoning using words such as 'because', 'therefore' and 'and so'.

Step 5: **Prove-** A watertight argument that is mathematically sound, based on generalisations and underlying structure. This is called deductive reasoning.

Deepening Learning

Every Maths lesson should show progress and/or help children to deepen their understanding and should build on prior knowledge, therefore all children should be challenged. Pupils are encouraged to make rich connections across mathematical ideas to develop deep interconnected understanding. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems rather than accelerated onto new content. When working with the whole class, teachers will direct some questions towards the more able children to challenge these children and maintain involvement.

Approach to Calculations

We follow the Power Maths Calculation Policies for EYFS, KS1 & KS2.

Home learning

At Grove Street we work with parents as partners in learning.

Key Stage	Home Learning Expectations
YR, KS1 & KS2 	Active Learn: A website which links directly to Power Maths. Teachers are able to set weekly learning challenges which link directly to the units taught in school.
Y2 & KS2	Times Table Rockstars: In KS2, children are encouraged to develop their Times table knowledge by taking part in a variety of times table games and activities on the app. Subject Leader monitors engagement and identifies a weekly 'Rockstar of the week' This is also celebrated with a whole school Class Dojo post.

Cross-curricular Links

Although Mathematics is taught as a stand-alone subject, every effort is made to link mathematics with other areas of the curriculum. Mathematical possibilities are identified across the curriculum at the planning stage. We also draw children's attention to the link between mathematics and other curricular work so children see that mathematics is not an isolated subject.

Equal Opportunities

At Grove Street Primary School, we feel that all children, irrespective of gender, ability, ethnic or cultural origins, should have equal access to all parts of the curriculum and that teaching and learning is structured so that each child has every opportunity to realise personal potential within mathematics.

Assessment

Assessment is continuous and ongoing; each lesson is marked using the whole-school marking policy and children are given 'read and respond' challenges where required to help consolidate knowledge and address misconceptions. In KS2 the children undertake weekly arithmetic tests and termly assessments. KS1 complete end of unit assessments for each Power Maths Unit.

Attainment and Progress

Attainment and progress are measured through the assessment process outlined above. Subject leaders hold termly moderation meetings with all teaching staff to monitor progress of all children- this is recorded on a 'core tracker'. All areas of teaching and learning in mathematics are considered and discussed when placing children on Below, Working Towards, ARE or Greater Depth.

Interventions

We use 'Number sense' for our interventions this focuses on the keep additive and multiplicative facts. We value these facts as the foundations for mathematics. The interventions are well structured and also follow a small steps/mastery approach.

Impact

The exploration of mathematics should be interactive and engaging, with content made relevant to children's real-world experiences and contextualised thus to support consolidation of knowledge and skill.

Children should approach mathematical study with confidence and enthusiasm, and view tasks and challenges that call for application of varied knowledge across units of work and the selection of multiple skills with self-assuredly and a willingness to collaborate.

Approach and response to reasoning activities should improve term on term, with the expectation that by the end of the year, children are happy to accurately define and use mathematical vocabulary introduced by their teacher, as well as complete stem sentences to complete mathematical statements or reasoning.

Teaching and support staff should also see this period of implementation as an opportunity to highlight and further improve concepts that are received well and have clear impact on progress and learning, while also analysing and evaluating practice that needs to be addressed, reviewed or replaced.

This policy was reviewed in September 2023 and will be reviewed again in September 2024 in response toany changes or advice given by the DfE, especially regarding assessment procedures.

Signed by
Headteacher:
Date:
Next review date: