



# Parkside Primary Academy

## Maths Policy

### INTENT

At Parkside Primary Academy, we endeavour to teach our children a rich and progressive curriculum. We believe that mathematics teaches us how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems.

We want to help children to understand and appreciate the pattern in both number and space in their everyday lives in and out of school. We encourage the children to develop these key and fundamental skills through their growing knowledge and understanding of the world.

We want children to learn to appreciate the contribution made by many people to the development of mathematics in our ever-growing society. Therefore, we aim to encourage a positive attitude towards maths, which is rooted in our core values of **courage** and **resilience**.

We embed a growth mindset through our assembly programme and the work of our maths ambassadors. The maths curriculum is adapted in response to starting points, recent trends and common barriers in order to meet the needs of all pupils. By using a range of techniques and resources, we can ensure all children, including those with SEND or those from disadvantaged backgrounds, can access their end of year expectations and achieve **excellence**.

Leaders conduct book monitoring, lesson observations, moderation, pupil voice surveys and interviews with the children to establish the impact of maths teaching at Parkside. The results of this feed further improvements and adaptations to the national curriculum in order to ensure we are providing our children with a world class learning experience which is underpinned by research and will help them to have high **aspirations** for their futures.

### AIMS

At Parkside Primary Academy, it is our intention that Maths is taught with its three core principles at the heart of how we interpret the content of the curriculum and what we do:

- **Conceptual Understanding:** In developing children's skills through enhancing their factual, conceptual and procedural knowledge, we allow them to deepen their mathematical understanding and be able to apply what they know to help them to solve problems.
- **Mathematical Reasoning:** The progression and development of mental calculations and efficiency in strategies will provide children with the skills which will allow them to communicate and present their findings effectively using appropriate mathematical language.
- **Problem-Solving:** At Parkside Primary Academy, Mathematics is integral to all aspects of life and it is with this in mind that we endeavour to ensure that children develop self-confidence in their ability to approach a range of mathematical problems.



## CURRICULUM COVERAGE AND PROGRESSION

See separate documents for an overview of Parkside's curriculum ([here](#)), and long-term plans ([here](#)) for each year group to see how we ensure coverage of the National Curriculum.

## PLANNING SEQUENCE

Our maths planning sequence starts with a long-term plan for each year group, which establishes what will be taught when, with considerations to the order of teaching and the prior knowledge children will need for each step. Each unit is then further detailed in medium term (unit) planning. Both the long-term and medium-term plans are underpinned by DFE-approved Power Maths scheme of work (White Rose edition), which supports breaking mathematical concepts into lesson-sized chunks.

Throughout a unit of teaching, all children will:

- Be introduced to and use quality mathematical vocabulary, which is also displayed in the learning environment to support
- Have opportunities to develop their fluency of the topic, shown in books, partner talk and work on mini-whiteboards
- Be exposed to appropriately levelled reasoning and problem solving, providing the opportunity to explain and deepen their understanding
- Continuously recap and revisit prior learning, being encouraged to link this to their current focus and see how the unit builds on knowledge.

Individual lessons are again built on the Power Maths scheme, which enables teachers to plan lessons with a clear and consistent structure, identify and address potential misconceptions, and adapt teaching and questioning to either strengthen or deepen learning. Reasoning and problem solving is at the heart of our maths teaching, with each lesson beginning with a 'neutral stance' discover problem. This allows pupils to engage in mathematical talk and reason with their peers, as well as showing them real-life applications for their learning. Manipulatives are also provided in maths lessons, where appropriate, allowing children to build a deeper understanding and make connections in their learning. Children can then complete the associated work independently, but this is enriched with other high-quality resources such as White Rose, Gareth Metcalfe and NRICH.

## ASSESSMENT AND FEEDBACK

Continuous feedback is a core part of how teaching and learning takes place at Parkside. Teachers assess and provide feedback within and over series of lessons. They do this by:

- providing and assessing against LO and SC each lesson (that are linked to EoYE and Parkside's 'I know... I can...' curriculum)
- using these assessments to group children or give 1:1 support in the next lesson so that they can all make progress
- being explicit about where the learning fits into their journey so children understand the purpose of their mathematical learning
- using the SC to actively mark during the lesson so pupils make instant progress by responding to feedback



At the end of a maths unit, children complete an end of unit check. This assessment identifies key weaknesses and gaps in learnings for individuals, groups and/or the whole class. This is then used to analyse the smaller steps within the mathematical concept. The teacher uses this analysis to plan their next maths unit, as well as informing interventions.

Furthermore, NFER tests (Years 3-5) and SATs past papers (Years 2 and 6) are used throughout the year to track children's overall progress towards their year group's end of year objectives. Question level analysis is then used to effectively identify gaps in learning and individuals who may need more support, allowing impactful interventions to be put in place. Additionally, this assessment allows teachers to form a summative judgement of a pupil's ability and inform parents at points throughout the year.

### ADDITIONAL PROVISIONS

At Parkside Primary Academy, we recognise that maths is fundamental to children's understanding of the world and is a key marker of later academic success. Due to the importance of this subject, we supplement maths lessons with additional activities that support children to develop their mathematical fluency and create engagement/a love for maths. This includes the use of White Rose Math's Flashback 4, whole-school Times Table Rockstar competitions, growth mindset assemblies focused on maths, and half-termly Maths Mission ~~in~~ possible days. We also teach fluency in KS1 and times tables in KS2 using discrete sessions as we recognise the importance of children having these firm foundations. See our specific times tables/fluency policy for the reasoning and structure behind these sessions ([here](#)). Appendix A of this document further outlines what we do and why, and how we measure the impact of these additional activities.

### MONITORING AND BENCHMARKING

Maths is monitored in a variety of ways at Parkside, in line with the Trust's Benchmarking system. We explore the strengths and areas for development by looking at pupils' books, conducting learning walks, evidencing learning environments, monitoring planning, investigating data and most importantly, speaking with the children.

From this extensive monitoring, leaders and governors are able to achieve an overarching view of maths in the school. By working alongside staff in this process, we can also pin point areas in which we can develop further or introduce some CPD. CPD is planned either as a whole staff, for groups of staff or on an individual basis dependent on what is needed.

### REMOTE LEARNING OFFER

Where required, the class teacher will upload work onto Class Dojo between 8.30am - 3pm and will provide feedback during those times. The teacher will decide what materials are most appropriate for the individual child. When a bubble or Phase Pod is in lockdown, remote education in core subjects and wider curriculum will continue. Teachers will model via recorded video (10 to 15 minutes) what is expected in learning for each of these lessons. This should equate to 4 to 5 hours of learning at home. The content they will be teaching will be the same content that they would normally deliver in class.


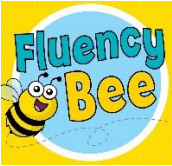
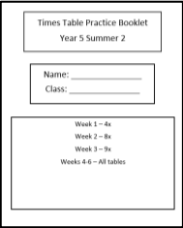



## REVIEW

This policy will be reviewed annually by the Maths subject leader with the leadership team, shared with the school community and approved by the Local Governing Body.  
(Policy will be ratified by Governors at the November 2023 meeting)



## APPENDIX A – WHAT WE DO AND WHY

<b>What</b>	<b>Who</b>	<b>When/how often</b>	<b>Why</b>	<b>Impact Measure</b>
Flashback 4 	Y1-Y6	Beginning of each maths lesson, 5-10 mins	Spaced retrieval practice, recapping key skills throughout year	Children self-mark, teachers address issues immediately and effectively
End of Block Checks	Y1-Y6	End of each unit of teaching	Assesses understanding, allows teachers to address misconceptions and plan interventions	Topic review boxes on MTPs identify issues, strengths and intervention groups
Fluency Bee 	KS1 (intervention for Y3)	3x weekly, 10-15 mins	Promotes declarative knowledge, ensures children are secure in basic building blocks of maths/key number facts	Whole class feedback is monitored and recurrent issues addressed, maths lead monitors class progress through termly assessments of selected children
Times table booklets 	KS2	3-4x weekly, 5 mins	Promotes declarative knowledge, helps children recall key multiplication facts	Children self-mark and can recognise improvement across half terms, improved mathematical confidence and recall of facts, maths bands linked to focus times table increase
Times table sessions	KS2	3x weekly, 10-15 mins	Builds deeper understanding, draws out patterns/links, helps children recall key multiplication facts	Maths lead conducts pupil voice – children understand why this/why now, can explain connections and links, maths bands linked to focus times table increase
Mission Impossible 	Y2, KS2 (run by maths lead initially)	End of each half term, one maths lesson	Builds problem solving strategies and characteristics, children better understand what problem solving is	Maths lead conducts pupil voice – attitudes and understanding towards problem solving improves.



<p>Y6 discrete, gradual build-up arithmetic sessions</p> 	Y6	Weekly	Recaps key learning throughout year and builds confidence. Tracks progress over time and identifies pupils who need further support	Children self-mark and teacher addresses issues immediately and effectively. Analysis of scores identifies pupils on track/not on track for intervention
<p>Whole school approach to growth mindset in maths</p> 	Whole school	Assemblies – half termly	Builds a positive attitude towards maths, embeds school's values of courage, aspirations, resilience and excellence in maths	Maths lead conducts pupil voice – children know what a growth mindset is and why it is ok to make mistakes
<p>Soundcheck assessments</p> 	LKS2, Y5	End of each half term	Tracks progress over time and identifies pupils who need further support	Analysis of scores identifies pupils on track/not on track, allowing interventions to be put in place/teaching to be adapted
<p>NFER assessments</p> 	Y1, Y3-Y5	Each term (Y1 summer only)	Assesses understanding, allows teachers to address misconceptions and plan interventions	Gap analysis identifies issues, strengths and intervention groups
<p>Mock SAT assessments</p>	Y2, Y6	Each half term	Assesses understanding, allows teachers to address misconceptions and plan interventions	Gap analysis identifies issues, strengths and intervention groups