WINDHILL PRIMARY SCHOOL

Mathematics

Intent	The mathematics curriculum intent is clear in that we want our pupils to become the best mathematicians and problem solvers that they can be. Pupils should be ready for their next stage of learning by the end of KS2 and also have key skills which can be applied to their real life both presently and as adults. The curriculum is designed to be **vertically integrated** with a clear progression for subject content to maximise learning. Our curriculum is also **inclusive and engaging**; all pupils are able to do maths at some level and have the right to be taught with high expectations and support for their learning. The curriculum is also designed to be appropriately challenging by providing our pupils with opportunities to develop **fluency, problem-solving** and **reasoning** skills. Finally, the curriculum is to be **interconnected** not just with pupils' learning in other subjects, but also with the wider world.			
Underpinned by	High expectations	Conceptual Teaching	Challenge (Fluency and Reasoning)	Vocabulary-Rich
	All children are expected to succeed and make progress from their starting point.	Our teaching is conceptual and focuses on pupils' understanding of the why. We use a Concrete-Pictorial-Abstract approach through school to introduce and embed new learning.	To reach their full potential as mathematicians, children are exposed to fluency problems in each lesson so that they can apply their learning. Children are also encouraged to become strong at the skill of reasoning.	Ambitious vocabulary is taught explicitly and is expected to be applied as appropriate. Children are expected to apply this vocabulary when expanding on their responses or collaborating with peers.

Implementation	**CPA Approach** Each new concept is now taught through a research-backed methodology of concrete-pictorial-abstract. School has invested significantly in equipment, extensive CPD for teaching and support staff, and continuous monitoring and support. This is now embedded from EYFS to Y6.	**A Deep Curriculum with Retrieval Learning** Through extensive research, collaboration with other math leads through network meetings, and collaboration with teaching staff (experts in their year group), we have designed a strong, single-cycle curriculum to provide the time for subjects to be explored in greater depth. Strong retrieval-based practice is woven throughout lessons and learning journeys to ensure that both disciplinary and substantive knowledge is retained.	**Vertically Integrated Curriculum** Through collaboration with class teachers (in key stage teams), the curriculum has been designed to ensure that it is progressive and vertically integrated, whilst allowing for retrieval learning. As leader, I led each meeting to ensure that the curriculum remained progressive between year groups and key stages.
	Timely Intervention The theme of interventions is catch-up not keep-up, although keep-up is still necessary. Pupils receive tier 2 and 3 interventions as appropriate and staff use pre-teach and same-day interventions to address misconceptions quickly. Numbots and TTRS can offer adaptive learning. Pre and Post assessment tasks allow	**Fluency** Fluency in learning has been a target for math lessons so that pupils can apply their skills and expand their knowledge. Through extensive cpd with teaching and support staff, fluency tasks and challenges are now an expected part of all lessons, which monitoring has confirmed.	**Vocabulary and Oracy** To support the learning of our pupils, vocabulary is core focus of the maths curriculum. Pupils are expected to speak in full sentences and use age-appropriate (but ambitious) vocabulary. This is modelled by staff and helps improve pupils' understanding.

	leaders to greater monitor the impact of intervention, and adapt as necessary.		
	Reasoning As an extension to the fluency and oracy, reasoning is now a focus for school. CPD has been delivered to teaching and support staff and will continue based on monitoring needs. There is an expectation that all pupils will reason and problem-solve in all lessons at an appropriate level.	**Arithmetic and Times Tables** Pupils are expected to develop strong arithmetic skills and times tables knowledge (x and ÷) to support their future and current learning. At least 1 morning task per week is dedicated to developing an improving these skills and they are a part of our curriculum for teaching. Times tables have been heavily targeted for improvement through CPD for staff among other support.	**Raising the profile** Each classroom creates a display dedicated to their maths learning. Whole school events, such as Maths week, are celebrated and pupils also enjoy TTRS competitions (see display board). Pupils also receive maths-based assemblies where they discover exciting and flashy aspects of the subject.

Impact	**CPA Approach** This methodology is embedded throughout each year group and is having is clearly positive impact on the conceptual learning and understanding of pupils. SEN pupils are particularly enjoying success through this approach.	**A Deep Curriculum with Retrieval Learning** The initial impact of the new curriculum is already very positive. Staff are well-prepared to follow this curriculum and there is a clear, shared understanding of the expectations regarding the depth and breadth of each subject.	**Vertically Integrated Curriculum** Due to the pandemic and the need for a recovery curriculum, the two-cycle approach has yet to be used for a full year. The impact of the new curriculum has still been strong as it has ensured progression between year groups and key stages. The continuous collaboration has also led to greater teacher ownership and to the curriculum being updated as issues arrive.
	Timely Intervention It is very evident throughout school that interventions are having a strong impact and ensuring that gaps are being closed. Pre-teach is enabling QFT to take place and SDI is quickly addressing misconceptions before gaps become gaps. Greater assessment in enabling intervention groups to be more effectively planned.	**Fluency** The impact of this has been clear as pupils are now facing fluency tasks and challenges throughout their learning. This is having a positive impact of the understanding of pupils and is evident when looking at their learning and independent assessment tasks.	**Vocabulary and Oracy** It is clear that pupils are far more knowledgeable and use rich vocabulary as standard practice. This allows for better collaboration and discussion, whilst enabling them to access maths which might have otherwise been unavailable to due the language used.
	Reasoning Reasoning is very strong in most areas school, with no areas being poor, and the CPD is well-received meaning that all staff can begin to promote reasoning in lessons. Where this is well applied, students show brilliant progress. Consistency across school is now an ongoing target.	**Arithmetic and Times Tables** It is very evident that pupils have improved in these areas and both general monitoring and feedback from staff show that pupils are finding new learning easier because they have these core skills. The MTC results were especially impressive and have led to greater impact in Year 5.	**Raising the profile** Pupils enjoy maths events and can comment how much they enjoy the subject (as evidenced from the recent LA maths review). Pupils use manipulatives from the display boards and see this as a normal part of school life.