The Orchard School

Subject & Curriculum Leadership Report

Subject area		Maths	Subject Leader	Jennie Beal
Date		September 2021		

Sections		Summary evaluation
1	**Introduction** *Why do we teach what we teach?*	Maths is an essential life skill children will need a secure understanding of throughout their whole life. At the Orchard school we want all children to become confident and fluent Mathematicians with a 'can do' attitude. We want them to enjoy Maths, be able to recall and use knowledge accurately and rapidly and have a secure and deep understanding of the fundamentals of Maths. For this reason, we 'Teach for Mastery' across the school, building knowledge upon knowledge and enabling all children to succeed in their Maths learning. We want the children to see mathematics as an essential element of communication and enable them to use mathematical vocabulary confidently and in the correct context.
2	**Curriculum** • **Intent** *(Include reference to SEND and disadvantaged pupils)*	At the Orchard school we provide a mathematics curriculum that is: • Accessible to all children and appropriate to every child's experience, prior achievement, level of ability, knowledge and understanding, including SEND and disadvantaged children. • Able to teach all children competence, fluency, and confidence in their mathematical knowledge • Taught with a clear well thought out focus (avoiding cognitive overload) following careful planning that ensures **all** children can achieve, including SEND groups and disadvantaged children of differing needs, abilities and previous experiences. Therefore, all children make the best individual progress. • Purposeful and relevant to everyday situations, so that the children can practically apply their knowledge. • Taught discreetly to ensure depth of subject-knowledge and understanding, but also using cross-curricular skills wherever appropriate. • Building Maths vocabulary from Reception through to Year 2 meaning all children have secure understanding of Maths vocabulary and can use this appropriately. We believe this builds cultural capital by developing a wider vocabulary for all children. • Broad and balanced learning in each year group, with clear progression and consistency from Reception to Year 2 allowing the building of knowledge, skills and vocabulary, through embedded repetition and small steps. • Carefully structured lessons which are thoughtfully and appropriately resourced to ensure a quality learning experience for each child incorporating repetition and reinforcement so knowledge is secured in long term memory. • An opportunity to work cooperatively in investigative work and real problem-solving encouraging talk for Maths and discussion.
	• **Implementation**	In KS1 we plan from the NCETM spines by following GLF guidance. All our detailed planning follow micro-steps and we have the flexibility to spend longer on a unit of work when needed. This enables all have mastered the concept before moving to the next step. We teach Maths as a discrete daily lesson. We also plan and teach NCETM 'Mastering Number' as a separate discrete short daily session to teach and practice fluency facts. Reception plan from the NCETM 'Mastering Number' for their planning for Number across the year, ensuring the Early Learning goals are taught and achieved in depth. They also use teach shape, space, and measure based on Early Years framework. Across the school, we supplement our planning with White Rose, Nrich and further

		NCETM resources that we need for our goals and the children's needs. Clear well-structured powerpoints are used in lessons with well-planned concrete, pictorial, and abstract and talk opportunities and activities throughout the lessons. The approach we follow ensures mastery, depth and consistency throughout the school. Precise planning, building on careful assessment, immediate feedback, precise, targeted questioning, support and opportunity for further practice ensures children are ready for the next small step the following lesson. Each class have Working wall maths displays. These have core number and relevant vocabulary and examples/questions. Children are independent in using these displays. Vocabulary is vital and focussed on throughout the school. Children are taught precise vocabulary and taught and encouraged to respond in full sentences. Stem sentences are part of all Maths lessons which are repeated and offer a scaffolding to ensure all children can succeed in lessons. The children are given lots of time to discuss their Maths as well as to rehearse and share responses.
	➢ **Impact** *(Include reference to SEND and disadvantaged pupils)*	Children have been shown to have a deeper understanding of their learning and can apply it in different situations. All children can access all Maths lessons. The repetitive and practical nature of the Mastery teaching ensures all children across the school including SEND and disadvantaged children can access the Maths and succeed. Teachers have increased subject knowledge and confidence in teaching Maths, also showing consistency across Year groups and the school. Lessons are clearly structured, with effective modelling and a 'ping pong' style of teaching, which has been shown to engage and involve all children. Children are more confident in using appropriate vocabulary throughout the school, benefitting from explicit vocabulary teaching, repetition and visual access. Children have an increased 'can do' attitude to their Maths learning and increased resilience. Feedback during transitions to the next year group (including St Lawrence Year 3) show that Number knowledge and understanding is much stronger. They have learnt to reason and apply these skills due to embedded practice.

WHOLE YEAR	2015/2016	2016/2017	2017/2018	2018/2019	2020/2021
Working towards/emerging		20.48%	16%	PKF3.5%/WT18.8%	20%
On track "Expected"	61.8%	38.55%	38%	44.7%	43.5%
On track "Expected" and above	75.8%	79.51%	82.1%	77.6%	80%
On track "Greater Depth"/ "Exceeding"	15%	40.96%	44.9%	32.9%	36.5%

3	**Broader curriculum** *How does this subject promote elements of the broader curriculum, including SMSC, British Values, Eco-Schools, etc.?*	Maths is incorporated within other curriculum areas, e.g. Science, DT, through measuring, shape and space, calculations etc. Our school 6R's are promoted in Maths, particularly resilience and reasoning, which are encouraged, identified and commented on regularly in lessons. Talk and listening to each other promotes good qualities in the children across subjects, school and life skills. They are taught and encouraged to listen and agree/disagree in a respectful manner justifying their thoughts. Pre-Covid we have had successful Whole school-enterprise weeks, incorporating a multitude of skills. Planning, teamwork, selling, money, design, measure.

<table>
<tr><td>4</td><td>Successes in the subject in the previous year
Focus should include the contribution of the subject to meeting whole school priorities</td><td colspan="2">➢ During the past five years we have been working with the SW London Maths hub in developing a consistent teaching for mastery whole school approach. As a result, subject knowledge and teaching have improved significantly. Teachers plan for microscopic steps in learning and ensure children have many opportunities to deepen their understanding and ability to use and apply their knowledge through carefully planned sequences of lessons. Shared training, observing each other and collaborative planning have ensured a whole school approach which has secured a high quality of teaching and learning. As a result of the teaching for mastery in mathematics school leaders have developed a "mastery for all" across the curriculum improvement plan.</td></tr>
<tr><td></td><td></td><td colspan="2">➢ Use of ready-to-progress and National priority focusses in planning and assessment on return from Lockdown and remote learning ensured a solid understanding of those areas ready for next stage of learning.</td></tr>
<tr><td></td><td></td><td colspan="2">➢ Boys/Girls have narrowed the gap at expected end of KS1
2017/18 2018/2019 2020/2021
45% 29% 43.2% 46.3% 42%/45%</td></tr>
<tr><td>5</td><td>Achievement
Attainment, progress and the quality of learning for individuals, different groups, including SEND pupils, boys/girls, disadvantaged, CLA. Emphasise key skill development across curriculum.</td><td>Strengths</td><td>Areas for Development</td></tr>
<tr><td></td><td></td><td>➢ Despite Lockdowns and school closures children still achieved consistently in their Maths learning and achievement. 80% children achieved expectations or above and 36.5% greater depth. Comparable to previous years</td><td>➢ Children still lacking automaticity and confidence in fluency of number facts within lessons/problem solving - adding a barrier to their learning.</td></tr>
<tr><td></td><td></td><td>➢ Narrowing of gender gap data at end of KS1 and End of reception</td><td>➢ EAL children had a drop in attainment.</td></tr>
<tr><td></td><td></td><td>➢ Use of Ready to progress planning/assessment and National Priority focusses enabled children to have a solid, deep understanding of those concepts ready for the next year group and stage of learning.</td><td>➢ Continue to develop/strengthen confidence in answering in full sentences in all children.</td></tr>
<tr><td>6</td><td>Teaching
Teacher subject knowledge and pupil expectations, engagement, motivation, challenge, progress, independence, reading and literacy skills, assessment and next steps in learning. Marking and feedback.</td><td>Strengths</td><td>Areas for Development</td></tr>
<tr><td></td><td></td><td>➢ Consistency of teaching across the school, teacher's confidence in teaching mastery maths.</td><td>➢ Improve confidence of LSA staff and refine questioning skills</td></tr>
<tr><td></td><td></td><td>➢ Teachers planning more specific microsteps and considering misconceptions within lessons and more confident subject knowledge.</td><td>➢ Continue to Improve methods of recording and ensuring consistency of approach</td></tr>
<tr><td></td><td></td><td>➢ Much more focussed use of specific, relevant resources-enabling children to be confident in using them. Engaging use of activities/ paired/group/problem solving work within lessons/across planning for week/termly etc.</td><td></td></tr>
<tr><td>7</td><td>Learning Behaviours
Including behaviour in lessons and around the school, attitudes to learning. Pupils' enjoyment and engagement in</td><td>Strengths</td><td>Areas for Development</td></tr>
<tr><td></td><td></td><td>➢ Children motivated and display a 'can do' attitude in class.</td><td>➢ Continue to develop parental engagement and understanding of the Teaching for mastery approach</td></tr>
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	the subject, views of pupils/parents. Include SMSC.		
		➢ Behaviour is good in lessons. Children engaged, ping pong style keeps pace going and use of manipulatives throughout the school.	➢ Ensuring children who have gaps in their learning have opportunity for keep up and catch up provision
		➢ Opportunity for 'talk' and stem sentences ensures rehearsal for children so they are confident at offering an answer/idea using appropriate vocabulary	
8	**Leadership/Management** *How well leaders demonstrate ambition, vision, high expectations, improve teaching and learning, develop staff, sustain improvement. Appropriate curriculum, equal opportunities, parental engagement.*	Strengths	Areas for Development
		➢ Teachers and SLT high expectations and engagement with subject, supporting the ongoing development of Maths Mastery	➢ Opportunities were limited for subject lead and peer observations (due to Covid) so timetabling these opportunities for 2021-2
		➢ Curriculum that allows all pupils to achieve and learn with deep understanding.	➢ Develop maths curriculum and approach in new Specialist Centre- observing and planning with centre lead
		➢ Continuing CPD with Maths for all including the subject leader.	
9	**Overall effectiveness**	Maths is strong at the Orchard. The children leave us with a good, solid understanding of Number with a good attitude to continue their learning. We are constantly fine-tuning and reviewing our Maths planning and approach to Mastery to enable the best learning for the children.	
10	**What is a good learner like on leaving The Orchard?**	A good learner demonstrates enthusiasm, enjoyment and resilience in learning. They know more and can do more. They show curiosity, confidence in attitude and will 'have a try'. Learning is embedded into their long-term memory. They make links in their learning, can reason using appropriate vocabulary and talk about their learning.	
11	**Key areas for subject development** *Especially achievement and quality of teaching*	➢ Increase automaticity and confidence in fluency of Number and facts by Implementing NCETM Mastering Number across the school ➢ Ensure those just below or not meeting expectation are targeted and supported. ➢ Increase consistency and confidence in Support staff.	