Focussed Priority 4	Sustaining Mastery in Mathematics
What will be different for children (emphasise learning & achievement)? Ofsted category cross reference: Quality of teaching, learning and assessment Outcomes for pupils	All staff have a shared understanding of what mastery means .Teachers have a deep understanding of mathematical concepts taught in the primary curriculum and know how to use different representations and models to ensure understanding. All pupils speak in full sentences and most do so independently and unprompted, when sharing ideas and explanations. Stem sentences are used both to provide structure when speaking and to support generalisation. Lessons are built up in small steps with clear models and images with assessment opportunities each small step. Pupils have enough time to practise skills to enable them to become secure but are also provided with opportunities to move on to reasoning. Games are used to allow pupils to secure fluency skills. Staff have a clear knowledge of which skills pupils must master in order to be ready to progress to the next lesson, next unit and next year group. Problem solving skills working systematically, trial and improvement, pattern seeking, generalising and specialising, visualise, conjecturing and convincing) are taught explicitly and opportunities to apply these skills are planned for regularly.

Success Criteria

SC1: Staff understand how stem sentences can be used for structure or generalisation and use these appropriately.

SC2: Staff know the ready to progress criteria and use these to assess learning and address gaps and misconceptions to ensure that pupils are ready to move on.

SC3: Teachers know which skills are needed for effective problem solving (working systematically, trial and improvement, pattern seeking, generalising and specialising, visualise, conjecturing and convincing) and plan for opportunities where these skills can be taught and practised.

SC4: Pupils attain fluency by regular intelligent practise and the use of mathematical games.

Data Targets

Due to Covid-19, there was no end of year data for July 2020. Data targets are based on pupil prior attainment at the previous key stage and FFT projections. Data targets will need to be reviewed as the academic year progresses and current progress and attainment can be taken into consideration.

All class teachers will set end of year targets for individual pupils on FFT, these will be reviewed during the year.

Reception Mathematics:

We are following the early adopter trial for reception this year. Baselines will be set using this new system and reviewed throughout the year.

Year Two End of Year Outcomes:

Year Group	Baseline attainment	Target attainment July 2021	Nov 20	Jan 21	Mar 21	July 21
Y2 (TA)	2019 EYFS EXP+= 72% GDS= 14%	EXP+ = 72% GDS = 15%	Target ARE+:% Actual ARE+ 60%	N/A	Target ARE+:% Actual: 62%	EXP+: 72% Actual: 61%
			Target GDS:% Actual 5%: %	N/A	Target GDS:% Actual: 5%	Target GDS: 15% Actual: 9%

Interim targets will be agreed after data drop one

Year Six End of Year Outcomes:

Year Group	Baseline attainment	Target attainment July 2021	Nov 20	Jan 21	Mar 21	July 21
Y6 (TEST)	KS1 APS/FFT starting point has been used to forecast targets.	EXP+ =75 % GDS = 20%	Target:20% Actual:19 % Target GDS:3% Actual:0 %	N/A N/A	Target:60% Actual: 56% Target GDS:12% Actual: 0%	Target: 75% Actual: 60% Target GDS: 20% Actual: 8%

Interim targets will be agreed after data drop one

Key People	**Funding & Resources**
Linda Embling,	TT rockstars White Rose premium Deepening understanding Release time for LE to attend maths hub meetings. Concrete resources

Actions (and those responsible)	**Who monitors?**	**Who evaluates? ***	**When**	**Check** **Date when completed**
Monitoring of planning, focussing on stem sentences. Feedback with specific actions and if needed additional training for key staff. (SC1)	LE	HS	October, January, June	16.10.20
Monitoring of planning and books with a focus on problem solving skills. Feedback with specific actions and if needed additional training for key staff. (SC3)	LE	HS	October January, June	
Training for staff on the use of the ready to progress criteria. (SC2)	LE	HS	October	04.11.20
Training for staff on problem solving skills and how to incorporate problem solving in a mastery curriculum. (SC3)	LE	HS	February	
Induction training for new staff to ensure they have a good understanding of stem sentences, fluency and the mastery approach.(SC1, SC4)	LE	HS	October	01.10.20
Moderation of maths assessments against the ready to progress criteria. (SC2)	Team leaders, LE	HS	June 2021	
Monitoring of times tables and number bonds fluency (SC4)	LE	HS	December, May, July	01.12.20
Pupil voice (through Microsoft forms) to assess impact on enjoyment from the use of games to improve fluency (SC4).	LE	HS	November, June	

Evaluation:

Impact Review January 2021

SC1: Staff understand how stem sentences can be used for structure or generalisation and use these appropriately.

Monitoring of planning in November 2020 showed that stem sentences were not always planned for. In response, the planning front slide now has a clearer structure with a focus section on stem sentences. In addition, all teaching staff attended a training session in January 2021 which included further information on the use of stem sentences and how to use resources such as the NCETM stem sentence banks.

New staff have an induction meeting with the maths lead. This ensures that they understand the expectations in maths and in particular the importance of the use of stem sentences.

Recent monitoring of planning shows that stem sentences are now planned for by all year groups, ensuring that all pupils access appropriate mathematical vocabulary.

Impact Review July 2021

Monitoring of planning shows that stem sentences are a regular part of lessons and work in books is showing an increase in correct use of mathematical vocabulary. Where pupils write about their mathematical work, they do so in more depth than previously.

Evaluation:

Impact Review January 2021

SC2: Staff know the ready to progress criteria and use these to assess learning and address gaps and misconceptions to ensure that pupils are ready to move on.

All staff have had training on using the ready progress criteria. They are now the main assessment statements used on FFT. Staff are using the ready to progress criteria to prioritise learning, particularly in light of the current lockdown and school closures.

Impact Review July 2021

Using the ready to progress criteria throughout the year has supported staff in prioritising key areas of learning, ensuring that pupils are ready to move on to the next year. Some year groups have spent longer on areas such as fractions to ensure that all ready to progress criteria are secure. Using the criteria from the prior year group has also supported staff on ensuring that any areas of learning not secure from the previous year was retaught.

Evaluation:

Impact Review January 2021

SC3: Teachers know which skills are needed for effective problem solving (working systematically, trial and improvement, pattern seeking, generalising and specialising, visualise, conjecturing and convincing) and plan for opportunities where these skills can be taught and practised.

This has now been introduced through the new lesson structure but has not yet been implemented fully due to the January lockdown. A book look was completed but issues around lesson structure and progression were identified and were prioritised. The Deep Dive in Mathematics, confirmed that this should be a focus in order to support teachers to plan clear sequences of learning, providing challenge for all. A longer training session addressed these issues and introduced a new lesson structure, giving additional opportunities for reasoning and problem solving.

Impact review July 2021

Teachers have continued to adopt and embed the new lesson structure and there is increasing evidence of purple box challenges in books as well as planning. This success criteria is however an area that due to changing priorities and Covid did not gain as much attention and focus as was initially planned and would benefit from further work.

Evaluation:

Impact Review January 2021

SC4: Pupils attain fluency by regular intelligent practise and the use of mathematical games.

For KS2, we have adapted our usual times table activities in light of the control measures for Covid-19. To assess their times tables knowledge, pupils have completed the soundcheck on TT rockstars regularly. This test mimics the DFE year 4 times table check.

year group	initial average	Current average	increase	20+
3	5	8	3	10% (6/60)
4	9	15	6	33% (20/60)
5	11	18	7	54% (32/59)
6	14	19	5	60% (36/60)

The initial date of soundcheck is for when the pupil did their very first soundcheck. For the majority of pupils in year 5 and 6, this was in summer 2019.

The number of pupils scoring above 20 marks (25 max) is increasing but it is clear that the gain from the initial test is not rapid enough. I will re introduce the Tackling Tables cards and adjust the use of them to fit with Covid –19 control measures as the use of the cards, have driven a more rapid improvement in the past. Pupils in year 3 and 4 particularly would benefit from more regular timed practise as well to ensure that their recall is rapid.

Impact review July 2021

Year 4 pupils took part in the TT Rockstars times table check:

Multiplication Tables Check	No. of Pupils	% who achieved 0-10 marks	% who achieved 11-17 marks	% who achieved 18-25 marks
Year 4	57	25	28	47

There is a number of pupils who have been identified as needing further work to secure their times table skills. This will be shared with the year 5 teachers. At the start of the new academic year, the tackling tables cards will be relaunched with all ks2 classes and monitored to ensure fidelity to the program and that enough time is dedicated.

Pupil premium children will have their own pack to take home and parents will receive additional information on how to support their children to learn the times tables.

Mathematical games have been used in all classes and pupils report that they have enjoyed using them. However, the use has not been frequent enough or sustained enough to secure improvement in key skills. This will need continued follow up in the next academic year.