

### **Primary Maths Department Action Plan including NAP 2018-19**

#### 1 STUDENTS ATTAINMENT, PROGRESS AND LEARNING SKILLS (PS1)

Leader: Head of Maths -Primary

Line Manager: HOP

Achievement Governor: LAB member External Evaluator: Vice President-GEMS

				<b>External Evaluator: Vice President-GEMS</b>			
Prioritised Objectives	Actions	Time Frame	Resources	Success (	riteria	Monitoring & Evaluation	Impact
To raise Maths Attainment in Phase 2 to VG and Progress in Phase 2 to O.  Year 2  → PTM	Extend students' interpretation and applications skills of mathematical concepts in integrated and diverse real life and/or unfamiliar context with continuous focus on Mental Maths, Algebraic and Geometric skills across all phases.	March 2018 ongoing Ongoing	<ul> <li>Time for PD/Modelling by outstanding practioners based on identified needs.</li> <li>Reviewed SOW, Rubrics, Student IEP, ILP sheet, Data Analysis</li> <li>Time for lesson observations and feedback</li> <li>Team teaching</li> <li>Moderation time and networking across phases in school and other schools.</li> </ul>	phase curric and r than	e majority of students in e 2 achieve above culum standards in Maths nost students make better expected progress from starting points.	HOD,SID,HOKS,HOP review provision ,monitor and review provision (lesson observation, Book look, SOW, lesson plans, data) termly with prompt action	End of year data is secure, ongoing lesson observation data is being evaluated.
To effectively analyse and use PTM data to identify strengths and gaps to inform planning.  To modify the	GAPS identified based on PTM results: Curriculum Content Category: Statistics Comparing & contrasting statistical information. Question wise analysis GAPS identified: Number- Mathematical reasoning- e.g. Filling in the missing middle number, which is 5 less than 20. Choose half of the kittens & click on them to make them black Process Category: Fluency in fact& procedures Problem Solving	May/June PTM analysis 2018 Ongoing	<ul> <li>PBL/Game based         Learning /Inquiry         based Learning         http://pblu.org/projects/th         e-tower-garden-challenge     </li> <li>Problem Solving- Stage 1         https://nrich.maths.or         g/13251     </li> <li>Maths Vocab building         game-         http://www.math-play.com/1st-grade-     </li> </ul>	accor both asses	students perform ding to their potential in internal and external sments.  students confidently & stently justify their findings mathematical reasoning to problems.	HOD, SID & teachers	Internal Attainment and External examination data trends are improving for all year groups.
curriculum based on PTM	Curriculum Modification based on PTM data analysis		vocabulary-game/1st-			HOD, SID & teachers	





results and in depth analysis.	<ul> <li>Scheduled 2 weeks Revision lessons.</li> <li>SOW reviewed &amp; extended period of 2 weeks for measures.</li> <li>Revisit &amp; reinforcement of these concepts in every term</li> <li>More real life based tasks-In lessons &amp; home learning</li> </ul>	Ongoing	grade-vocabulary- game.html	<ul> <li>Most students confidently</li> </ul>	HOD, SID &	
TIMSS: To integrate the TIMSS 2019 Mathematics Framework into the SOW.	GAPS identified based on PTM results:  Content Domain:  Number  Problems involving odd & numbers Problem situations in context of real life.  Measurement & Geometry Perimeter of simple polygons Properties of shapes including symmetry  Data Read and interpret data from line graphs and pie charts	Ongoing	TIMSS style questions https://www.nfer.ac.uk/TI MSS/sample-questions.cfm	& consistently justify their findings to solve TIMSS style questions using mathematical reasoning independently in a range of situations.  Most students can interpret the data and use different approaches to present the data.	teachers	High percentage of students in the advanced International benchmark band.
<ul> <li>To modify the curriculum based on TIMSS report and data analysis.</li> <li>To embed high level of Mental Maths in unfamiliar and context.</li> </ul>	Curriculum Modification based on TIMSS report and data analysis  Lessons:  Starter/ Plenary - Convince me Why? Activities to provide mathematical arguments to support their strategy or solution.  TIMSS style questions during the starter/plenary.  Home learning: Survey style tasks(PBL)- Conduct a survey, collect information, draw inferences & present the data. Include  TIMSS style questions -as task/online quiz		TIMSS Mathematics framework http://timssandpirls.bc.edu /timss2019/frameworks/do wnload-center/#	<ul> <li>Skilful questioning deepens thinking skills and supports understanding of all students.</li> <li>Most can use different strategies and confidently solve complex/2 step word problems.</li> </ul>	HOD, SID & teachers	
To develop a deeper comprehension and inferential skills	Meekly routines Maths comprehension Task cards Maths Challenge Question MCQ- (Every Sun) - Word problem- simple & complex. TIMSS style questions. Events: To encourage students to enter Mathematical Competitions e.g. STEM Olympiad, KENKEN, Maths quiz, WIN SPARKS PBL/Game based Learning /Inquiry based Learning in lessons and theme days/weeks.	Ongoing		<ul> <li>Most students use high reasoning skills and logical systematic thinking to arrive at solutions to problems set in a novel or unfamiliar situations.</li> </ul>		





Year 3	GAPS identified based on PTM results: Curriculum Content Category: Geometry e.g. Identify the properties of a given 2 D shape.  Question wise analysis GAPS identified: Number - Place Value & Odd & Even properties. Make the subtraction calculation with the smallest possible answer. Type in figures the number four hundred and eighty one. Look at the numbers on the screen and click the	May/June PTM analysis 2018	Maths Vocab building game- http://www.math- play.com/4th-grade- vocabulary-game/4th- grade-vocabulary- game.html	<ul> <li>Most students perform according to their potential in both internal and external assessments.</li> <li>Most students confidently &amp; consistently justify their findings using mathematical reasoning to</li> </ul>	HOD, SID & teachers	Internal Attainment and External examination data trends are improving for all year groups.
To modify the curriculum based on PTM results and in depth analysis.	odd number.  Process Category: Fluency in facts & Procedures  Curriculum Modification based on PTM data analysis:  Scheduled 2 weeks Revision lessons. SOW reviewed & extended time frame. Revisit & reinforcement of these concepts in every term More real life based tasks-In lessons & home learning			solve problems.	HOD, SID & teachers	
Year 4  ❖ TIMSS: ■ To integrate the TIMSS 2019 Mathematics Framework into the SOW.	Curriculum Modification in SOW based on TIMSS Syllabus 2019 In the Content Domain: Number  Place value extended to 6 digits Problems involving odd & numbers Problem situations involving decimals with one or two places in context of money	Ongoing	TIMSS style questions https://www.nfer.ac.uk/TI MSS/sample-questions.cfm  TIMSS Mathematics framework http://timssandpirls.bc.edu	<ul> <li>Most students confidently &amp; consistently justify their findings to solve TIMSS style questions using mathematical reasoning independently in a range of situations.</li> <li>Most students can</li> </ul>	HOD, SID & teachers	High percentage of students in the advanced International benchmark band.
	Measurement & Geometry  Perimeter of polygons Properties of shapes including rotational symmetry  Data Read and interpret data from line graphs and pie charts	Ongoing	/timss2019/frameworks/do wnload-center/#	<ul> <li>interpret the data and use different approaches to present the data.</li> <li>Skilful questioning deepens thinking skills and supports</li> </ul>		





<ul> <li>To modify the curriculum based on TIMSS report and data analysis.</li> <li>To embed high level of Mental Maths in unfamiliar and context.</li> <li>To develop a deeper comprehension and inferential skills</li> </ul>	Curriculum Modification based on TIMSS report and data analysis  Lessons:  Starter/ Plenary - Convince me Why? Activities to provide mathematical arguments to support their strategy or solution.  TIMSS style questions during the starter/plenary.  Home learning: Survey style tasks(PBL)- Conduct a survey, collect information, draw inferences & present the data. Include TIMSS style questions —as task/online quiz  Weekly routines  Maths comprehension Task cards  Maths Challenge Question MCQ- (Every Sun) - Word problem- simple & complex.  TIMSS style questions.  Events: To encourage students to enter Mathematical Competitions e.g. STEM Olympiad, KENKEN, Maths quiz, WIN SPARKS	Ongoing		<ul> <li>understanding of all students.</li> <li>Most students display skills to critically think, solve, analyse &amp; explain problems in lessons.</li> <li>Most students use high reasoning skills and logical systematic thinking to arrive at solutions to problems set in a novel or unfamiliar situations.</li> </ul>	HOD, SID & teachers	
Year 4  → PTM  To effectively analyse and use PTM data to identify strengths and gaps to inform planning.  To modify the curriculum based on PTM results and in depth analysis.	PBL/Game based Learning /Inquiry based Learning in lessons and theme days/weeks.  GAPS identified based on PTM results: Curriculum Content Category: Measurement Time- e.g. My watch says half past one in the afternoon. What would a digital clock say? Money- e.g. How many 20 pieces does Mr.Smith get in exchange of a £ 5 note?  Question wise analysis GAPS identified: Number- How many more invitations can she make with the left over stickers?  Process Category: Fluency in facts & Procedures Fluency in conceptual understanding  Curriculum Modification based on PTM data analysis:	May/June PTM analysis 2018 Ongoing	Maths Vocab building game- http://www.math- play.com/3rd-grade- vocabulary-game/3rd- grade-vocabulary- game.html  Problem Solving- Stage 2 Real life based tasks https://nrich.maths.org/pri mary-upper	Most students perform according to their potential in both internal and external assessments.	HOD, SID & teachers  HOD, SID & teachers	Internal Attainment and External examination data trends are improving for all year groups.





	<ul> <li>Scheduled 2 weeks Revision lessons.</li> <li>SOW reviewed &amp; extended time frame.</li> <li>Revisit &amp; reinforcement of these concepts in every term</li> <li>More real life based tasks-In lessons &amp; home learning</li> </ul>	Ongoing				
Year 5  ❖ TIMSS: ■ To integrate the TIMSS 2019 Mathematics Framework into the SOW.	Curriculum Modification in SOW based on TIMSS Syllabus 2019 In the Content Domain: Number Simple equations Problem situations involving decimals with one or two places	Ongoing	TIMSS style questions https://www.nfer.ac.uk/TI MSS/sample-questions.cfm	<ul> <li>Most students confidently &amp; consistently justify their findings to solve TIMSS style questions using mathematical reasoning independently in a range of situations.</li> </ul>	HOD, SID & teachers	High percentage of students in the advanced International
<ul> <li>To modify the curriculum based on TIMSS report and data analysis.</li> <li>To embed high level of Mental Maths in unfamiliar and context.</li> <li>To develop a deeper comprehension and inferential skills.</li> <li>Rigorous practice and discussion of TIMSS questions with the present Year 5 for TIMSS 2019.</li> </ul>	Measurement & Geometry Perimeter of polygons Volume filled with cubes Properties of shapes including rotational symmetry  Data Read and interpret data from line graphs and pie charts  Curriculum Modification based on TIMSS report and data analysis Lessons: Starter/ Plenary - Convince me Why? Activities to provide mathematical arguments to support their strategy or solution. TIMSS style questions during the starter/plenary. Home learning: Survey style tasks(PBL)- Conduct a survey, collect information, draw inferences & present the data. Include TIMSS style questions —as task/online quiz Weekly routines Maths comprehension Task cards Maths Challenge Question MCQ- (Every Sun) - Word problem- simple & complex. TIMSS style questions. Events:	Ongoing	TIMSS Mathematics framework http://timssandpirls.bc.edu /timss2019/frameworks/do wnload-center/#	<ul> <li>Most students can interpret the data and use different approaches to present the data.</li> <li>Skilful questioning deepens thinking skills and supports understanding of all students.</li> <li>Most students display skills to critically think, solve, analyse &amp; explain problems in lessons.</li> <li>Most students use high reasoning skills and logical systematic thinking to arrive at solutions to problems set in a novel or unfamiliar situations.</li> <li>Most students perform according to their potential in both internal and external assessments.</li> </ul>		International benchmark band.



Year 5  ❖ PTM  ■ To effectively analyse and use PTM data to identify strengths and gaps to inform planning.  ■ To modify the curriculum based on PTM results and in depth analysis.	To encourage students to enter Mathematical Competitions e.g. STEM Olympiad, KENKEN, Maths quiz, WIN SPARKS PBL/Game based Learning /Inquiry based Learning in lessons and theme days/weeks.  GAPS identified based on PTM results: Curriculum Content Category: Measurement Time- e.g.  A TV programme starts at ½ past 4 ends at ½ past 6. How long did it last? How many weeks are fifty-six days? There are 31 days in Aug. How many days are there after the eighteenth of Aug? Geometry- e.g. Which is the smallest angles? Click on all the squares that are cut into 2 equal pieces?  Question wise analysis GAPS identified: Measurement- Money - Calculate change involving decimals-Bob spends 3 pounds sixty. He pays with a 5-pound note. How much change does he get? Process Category: Fluency in facts & Procedures Problem Solving  Curriculum Modification based on PTM data analysis: Scheduled 2 weeks Revision lessons. SOW reviewed & extended time frame. Revisit & reinforcement of these concepts in every term More real life based tasks-In lessons & home learning	May/June PTM analysis 2018 Ongoing	Maths Vocab building game- http://www.math- play.com/3rd-grade- vocabulary-game/3rd- grade-vocabulary- game.html  Problem Solving- Stage 2 Real life based tasks https://nrich.maths.org/pri mary-upper	Most students perform according to their potential in both internal and external assessments.	HOD, SID & teachers	Internal Attainment and External examination data trends are improving for all year groups.
Year 6  ❖ TIMSS: ■ To integrate the TIMSS 2019 Mathematics Framework into the SOW.	Curriculum Modification in SOW based on TIMSS Syllabus 2019 In the Content Domain: Number Problems involving odd & numbers	Ongoing	TIMSS style questions https://www.nfer.ac.uk/TI MSS/sample-questions.cfm	<ul> <li>Most students confidently &amp; consistently justify their findings to solve TIMSS style questions using mathematical reasoning</li> </ul>	HOD, SID & teachers	





	T	1	1	1		
	<ul><li>Simple equations</li></ul>			independently in a range of		High percentage of
	<ul> <li>Problem situations involving decimals</li> </ul>			situations.		students in the
	with one or two places					advanced
		1		<ul><li>Most students can</li></ul>		International
	Measurement & Geometry	1		interpret the data and use		benchmark band.
	<ul><li>Perimeter of polygons</li></ul>		TIMSS Mathematics	different approaches to		
	<ul> <li>Volume filled with cubes</li> </ul>		framework	present the data.		
	<ul> <li>Properties of shapes including rotational</li> </ul>		http://timssandpirls.bc.edu			
	symmetry		/timss2019/frameworks/do			
	<u>Data</u>		wnload-center/#	<ul> <li>Skilful questioning deepens</li> </ul>		
	<ul> <li>Read and interpret data from line graphs</li> </ul>			thinking skills and supports		
To modify the	and pie charts			understanding of all		
curriculum based on	·			students.		
TIMSS report and	Curriculum Modification based on TIMSS report				HOD, SID &	
data analysis <u>.</u>	and data analysis			<ul> <li>Most students display skills</li> </ul>	teachers	
To embed high level	Lessons:			to critically think, solve,		
of Mental Maths in	Starter/ Plenary - Convince me Why? Activities to	1		analyse & explain		
unfamiliar and	provide mathematical arguments to support their			<b>problems</b> in lessons.		
context.	strategy or solution.			·		
	TIMSS style questions during the starter/plenary.			<ul> <li>Most students use high</li> </ul>		
To develop a deeper	Home learning:			reasoning skills and logical		
comprehension and	Survey style tasks(PBL)-	Ongoing		systematic thinking to		
inferential skills	Conduct a survey, collect information, draw			arrive at solutions to		
	inferences & present the data. Include			problems set in a novel or		
	TIMSS style questions –as task/online quiz			unfamiliar situations.		
	Weekly routines					
	Maths comprehension Task cards					
	Maths Challenge Question MCQ- (Every Sun) -					
	Word problem- simple & complex.					
	TIMSS style questions.					
	Events:					
	To encourage students to enter Mathematical	1				
	Competitions e.g. STEM Olympiad, KENKEN, Maths					
	quiz, WIN SPARKS	1				
	PBL/Game based Learning /Inquiry based					
	Learning in lessons and theme days/weeks.	1				
To bridge the 40		1				
points gap identified					HOD, SID &	
and ensure similar	Early intervention, close monitoring & follow up of			■ Girls are confident in	teachers	
performance of boys	girls performance.			presenting their findings	teachers	
and girls.	Personalised strategies in place to engage and			using mathematical		
and girls.	extend opportunities for girls largely. Lead &			reasoning independently in		
	present in lessons & events :			a range of situations during		
	WIN sparks			both lessons & events.		
	1			DOUT TESSOTIS & EVEITS.		
	Maths Quiz	1	1			



Year 5	Mental Maths Competition   Interhouse Maths Quiz   KEN KEN Competition   STEM Olympiad							
	SOW reviewed & extended time frame.  Revisit & reinforcement of these concepts in every term  More real life based tasks-In lessons & home learning  To analyse & continue to effectively use the CAT4 data to identify groups and provide early  To identify groups and provide early  SOW reviewed & extended time frame.  More real life based tasks-In lessons & home learning  May/June CAT4 Reports  CAT4 Reports  CAT4 Combination Reports	To effectively analyse and use PTM data to identify strengths and gaps to inform planning.  To modify the curriculum based on PTM results and in depth analysis.  CAT 4 To analyse & continue to effectively use the CAT4 data to identify groups and provide early	Mental Maths Competition Interhouse Maths Quiz KEN KEN Competition STEM Olympiad  GAPS identified based on PTM results: Curriculum Content Category: Measurement Time –Calculate time intervals & Money-Calculate change involving decimals Number: For e.g. Fill in the next 2 numbers in Liam's sequence. Type seventy six divided by ten as a decimal. Question wise analysis GAPS identified: Number- Applying their problem solving skills to solve money based problems involving decimals. Type a Square number between twenty and thirty.  Measurement-Money-How many pence are there in 23 pounds? My shopping bill comes to 14.86. How much change shall I receive from a 20 pound note? Process Category: Fluency in facts & Procedures Fluency in conceptual understanding  Curriculum Modification based on PTM data analysis:  Scheduled 2 weeks Revision lessons. SOW reviewed & extended time frame. Revisit & reinforcement of these concepts in every term More real life based tasks-In lessons & home learning  Use the analysis to identify and provide appropriate challenge to support high achievers and Gifted with ALP &Talented with a TLP. Meeting parents accordingly to share strategies and	PTM analysis 2018  Ongoing  May/June CAT4 results	game- http://www.math- play.com/3rd-grade- vocabulary-game/3rd- grade-vocabulary- game.html  Problem Solving- Stage 2 Real life based tasks https://nrich.maths.org/pri mary-upper	<ul> <li>according to their potential in both internal and external assessments.</li> <li>Most students have secure knowledge of their starting points through regular selfmarking using rubrics and reflection of their own PT and CAT4 results along with internal</li> </ul>	HOD,SID & all teachers	Attainment and External examination data trends are improving for all





				Linkster. 11.		High achievers and G&T pupils		In process of
•	To personalise lessons plans	Involving parent reps to support the and lower achievers.		Link: <a href="http://www.teachhub">http://www.teachhub</a> <a href="https://www.teachhub.com/using-differentiated-">http://www.teachhub</a> <a href="https://www.teachhub.com/using-differentiated-">https://www.teachhub</a> <a href="https://www.teachhub.com/using-differentiated-">https://www.teachhub</a> <a href="https://www.teachhub.com/using-differentiated-">https://www.teachhub</a> <a href="https://www.teachhub.com/using-differentiated-">https://www.teachhub</a> <a href="https://www.teachhub.com/using-differentiated-">https://www.teachhub</a> <a href="https://www.teachhub.com/using-differentiated-">https://www.teachhub</a> <a href="https://www.teachhub.com/using-differentiated-">https://www.teachhub.com/using-differentiated-</a>				



# 2. QUALITY OF TEACHING AND ASSESSMENT (PS3) Leader: Head of Maths -Primary Line Manager: HOP

Achievement Governor: LAB member External Evaluator: Vice President-GEN





#### 3. LEADERSHIP AND MANAGEMENT (PS6)

**Leader: Head of Maths - Primary** 

Line Manager: HOP

Achievement Governor: LAB member

				Achievement Governo External Evaluator: Vio		
Prioritised Objectives	Actions	Time Frame	Resources	Success Criteria	Monitoring & Evaluation	Impact
■ To raise Effectiveness of Leadership and Self Evaluation and improvement planning to outstanding.	<ul> <li>Specific tasks and duties allotted to SID as a part of succession planning:</li> <li>Work with SID and evaluate both internal and external data and accurately analyse and bridge the identified gaps.</li> <li>Encourage SID to plan, lead events and activities and evaluate as WWW and EBI.</li> <li>Build rigour and consistency in accurate evaluation and monitoring of actions and to ensure accurate evaluation of teaching and learning in relation to students' achievements.</li> <li>Innovative and creative solutions to ensure the provision of Art and Music</li> </ul>	March 2018 ongoing	Sharing outstanding samples of SEF and action plans.	<ul> <li>Rigorous Monitoring – paired observations and impact evaluation enabling improved student outcomes across all phases.</li> <li>Continued improvement over time and improving trends of PT results.</li> <li>Art and Music provision enhanced across all phases.</li> </ul>	HOD,SID,HOKS & HOP	Strategic actions like paired observations, Individual progress Plan are ongoing and rigour in monitoring impact and prompt support is enabled.  Positive outcomes of all the rigour and monitoring has improved T&L and use of assessment data hence, outstanding student outcomes.  Work in progress now for new cohort for 2018-19 and rigour in place for monitoring highest standards and support in place.