

Improving the teaching and learning within Mathematics for mixed-age classes across school

2022-2023

Area for development (Why?) What needs to change e.g. teacher behaviour, student behaviour, attainment?	Intervention (What?) What are the essential 'active ingredients' of the intervention? What activities and behaviours will you see when it is working?	Implementation (How?) How will it be done? What blend of activities are required?	Outcomes (How well?) How will you know that it is working? Do staff feel the approach is feasible and useful?	Final Outcome (and so?) How will pupils, teachers and the school benefit?
Teachers - Teachers lack confidence in the effective use of CPA approach and the use of manipulatives in the classroom, especially for lower attaining/SEN pupils. - Layout and presentation of work is inconsistent throughout phrases which leads to pupils having different expectations and experiences in relation to various methods exposed to and used in mathematics. - UKS2 data not consistent across all 3 classes, particularly those working at a greater depth standard. Children - Lower attaining readers are disengaged from tackling written maths problems. - SEND and lower attaining PP pupils are not receiving enough opportunities to re-visit informal methods and concrete materials. - There is a GAP in mathematical vocabulary knowledge between pupils.	Active Ingredient 1 Mathematic subject leaders will model and monitor the delivery and structure of mixed aged maths lessons and expectation of layout and presentation in books. This will help ensure that all maths lessons are following the same procedure/expectations consistently throughout the school. Active Ingredient 2 Teachers will be confidently planning across two year groups, especially those who have moved to new year group phases. They have a clear understanding of both the progression in knowledge and skills required within each area of mathematics. Teachers will know the prior attainment of all of the children in reading, writing and mathematics.	- Maths leaders to attend KYRA networking forums to ensure they are up to date with relevant practice and classroom based research. - In school support for teaching staff from subject leaders/SLT. Subject leaders to model effective mixed age maths lessons and to monitor the progression against the outcomes. - Subject leader action plan identifies and outlines key actions (smaller steps from those in SDP) - Re-visit the EEF guidance for making best use of teaching assistants. - Teachers to follow the updated 2022 version of White Rose maths small steps and resources to provide a coherent delivery across all year groups. - Staff to attend regular internal and external moderation to ensure their children's work is in line with national expectations.	Short Term (from September 2022) - Maths leaders will have developed an action which will have been shared with the whole school team. Updated calculation policy will be a key 'go to' document for all staff to support differentiation and stepping stones when considering planning for learning. - Leaders to observe the use of manipulatives and resources in classrooms to ensure effective use of them, specifically within KS1 and UKS2. - All teachers are familiar with the progression frameworks for maths in order to support planning across two year groups. - Updated White Rose mixed year planning LTP in place. - Maths leaders to lead staff meeting on internal moderation to look at the use of manipulatives and CPA approach within workbooks. - Teachers have a sound knowledge for the teaching of mathematics. Any further CPD/support is planned for as part of Performance	Increased pupil engagement and confidence in mathematics. Teachers are upskilled to effectively plan and deliver maths on a daily basis for their children and mixed aged classes. A consistent long term approach to the teaching and learning in mathematics across school. Strong subject leadership. A clear programme for ongoing monitoring and evaluation in mathematics. Children having a secure and developed knowledge across a variety of mathematical concepts and strands. Pupils have made good progress across the year and can demonstrate their knowledge.- UKS2 SATs scores will represent the upskilling of maths and show evidence of secure mathematical foundations.

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<u>Attainment and Progress</u> The attainment GAP for SEND and PP is significantly lower in a number of year groups. Factors affecting this have been the prioritising of pastoral and medical needs.	<u>Active Ingredient 3</u> All learners in UKS2 will have the confidence to use and have consistent access to high quality resources, including manipulatives to aid and enhance their learning in mathematics. Learners should be able to independently access and choose their high quality resource.	- Teachers to use the 2022/23 calculation policy to provide a broad and balanced approach to CPA learning - Subject leaders to host a staff meeting about successfully using manipulatives and provision for SEN and bottom 20%. - Pupil Progress meetings will highlight staff knowledge and understanding around both attainment and progress - Staff pick up and recognise misconceptions in a timely manner within the lesson, giving children instant verbal feedback and opportunities to erase misconception. - Workbooks are of high standards following the marking and feedback policy to promote progress and limit misconceptions. - Training for all staff on mastery across all ability ranges. - All staff and children have access to the high quality resources at any time. Children should have the autonomy to select their own resources to aid their learning style. - Monitoring the use of mathematical vocabulary across school through lesson drop ins, discussions with children, observations of the classroom environment, learning walls and regular book looks.	management and through monitoring activities. <u>Medium Term</u> <u>(From February 2023)</u> - Subject leaders/SLT to model and monitor lessons to ensure that mixed age maths is being delivered in a coherent and structured manner with a CPA approach and manipulatives. - SENDCo to support in the monitoring and provision mapping for appropriate interventions. - Staff are consistently using a range of practical strategies for teaching vocabulary in lessons (CPA). - Subject leaders ongoing monitoring and evaluation of maths across school is a growing strength. - All teachers have a better knowledge and understanding of how the maths curriculum builds on what progression through the subject looks like and can use this to support their planning, delivering quality teaching across a mixed-age class. <u>Long Term</u> <u>(By November 2023)</u> - Assessment in maths is used well to help pupils embed and develop knowledge fluently. It checks understanding and informs teaching. - Mathematical vocabulary becomes an integral aspect when teaching any element of mathematics including when cross-curricular.	
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