



GATEWAY FEDERATION SUBJECT STATEMENTS

MATHEMATICS

Date: April 2020

INTENT (Aims, Aspirations, Linked to school values, Linked to our 'Federation Curriculum Statement')

In the Gateway Federation, we recognise the importance of maths to everyday life and how it connects to many other schools subjects; we also acknowledge that the successful teaching and acquisition of key maths skills as outlined in the National Curriculum 2014 – fluency, reasoning and problem-solving – are critical to the future careers and jobs of all of our pupils. Determined to foster and develop a real love of the subject and a thirst for knowledge in all children, we are driven by the following key values:

- **Self-confidence** - developing and building up children's confidence so that they believe in themselves and their ability to do maths
- **Resilience** – to be quietly determined when tackling challenging work and to be able to bounce back quickly from defeats and failures
- **Ambition** – to be ambitious when thinking of what they can achieve in the subject and have high aspirations for their future

By using the Teaching for Mastery (TFM) approach as our core teaching method, we aim to:

- *Inspire children to love maths*
- *Encourage children to take an active role in their learning*
- *Ensure that children become secure in all key maths facts*
- *Support and assess all children so they achieve their full potential*
- *Use targeted and timely interventions as well as engaging resources*
- *Plan lessons that are inspiring, fun and logically sequenced*
- *Foster a growth mind-set amongst children.*

IMPLEMENTATION (Long term Plan, Teaching approach, Wider community, Ensuring Progression, Wider Opportunities, Enrichment / Additions to the curriculum.)

Driven by the National Curriculum 2014 in Key Stage 1 & 2, we have implemented White Rose Maths as our main teaching scheme of work to support staff in the Teaching for Mastery (TFM) approach. This is also supported by mastery materials from the National Centre for Excellent Teaching of Maths (NCETM) and problem-solving tasks from nrich.com. In the Early Years Foundation Stage, we use Number blocks from the NCETM in conjunction with concrete and pictorial equipment both inside and outside the EYFS classroom. Staff are guided by the respective Key Stage maths objectives (National Curriculum 2014) when it comes to identifying what to plan and on a daily basis, the long-term overviews from White Rose V2.0 are followed. Flexibility amongst how teachers plan and deliver objectives is driven by the needs of individual cohorts. Regular conversations take place amongst subject leaders and class teachers to ensure that children have full opportunities to grasp all of the curriculum.

In addition to the general TFM principles, lessons are also underpinned by:

- **Targeted questioning by staff**
- **The selective use of Concrete Pictorial Abstract (CPA) manipulatives**
- **Regular opportunities to practise fluency skills leading to reasoning and problem-solving**
- **Visits to other schools to take part in maths challenges**

Children who have SEN or EAL are supported in a number of ways including; teaching key vocabulary prior to/at the start of the topic, seating children alongside good role models to support one another, providing visual/practical prompts, teaching lessons using a range of different techniques to appeal to different learning styles e.g. videos, drama, practical movement, use of outside space, repetition etc. and using directed adult support.

IMPACT (Measure of Success)

Successful mathematicians at both schools are characterised by having:



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- *An understanding of the important concepts and an ability to make connections within mathematics.*
- *A broad range of skills in using and applying mathematics.*
- *Fluent knowledge and solid recall of number facts and the number system.*
- *The ability to show initiative in solving problems in a wide range of contexts, including the new or unusual.*
- *The ability to think independently and to persevere when faced with challenges*
- *The ability to reason, solve problems and make sense of solutions.*
- *A wide range of mathematical vocabulary.*
- *A commitment to and love of the subject.*

Learning walks, exercise book analysis and staff discussions: Through paired learning walks –done with both our School Improvement Partner and Maths Hub Leader – we observe maths lessons regularly, analyse and discuss work that is done in class with teachers and check children’s work in exercise books. Discussions with pupils and staff also take place.

Measurement of end of Key Stage outcomes: Using the teaching resources as previously outlined, we measure the impact of the 2014 National Curriculum for maths by the following methods:

1. End of term White Rose assessments for Years 1 – 6
2. End of Key Stage 1 and 2 SATS results against the planned outcomes
3. Pupil questionnaires to gauge pupil attitudes to the subject

Positive areas for the subject. (What is working well in our schools?)

1. The implementation and use of White Rose V2.0
2. The adoption by all staff of the teaching and learning principles behind the Teaching for Mastery approach
3. Joint participation in the SHAW maths hub for the last 2 years

Areas for development for the subject (2 or 3 points at the most)

1. Outdoor learning environments for EYFS
2. The use of the CPA approach across both schools – explore online staff CPD with White Rose

Examples of experiences & activities children will have / do.

- Whole School Maths day
- Maths Competition at JMHS & The Crypt School
- Inter house competitions on TT Rockstars

Recent Curriculum Training / INSET

1. White Rose online bar-modelling training
2. Individual staff participate in Year 2 Sustaining Mastery NCETM course

IMPACT

- Staff more confident at teaching the mastery approach.
- Staff beginning to use CPA to teach each small step of progression.

Curriculum Training Needs / Individual training needs.

1. We need to ensure that all staff have completed their online White Rose Bar-modelling training
2. Provide training in NCETM CPD MATERIALS to Key Stage 1 staff across both schools