



Lesson study – Maths (September 2019)

Context

Why introduce a lesson study focusing on numeracy across the school at MHS?

Students and Teachers

- To develop domain specific thinking with maths in other subject by prompting student to think about subject content using the tools of mathematics;
- To develop skills to ask mathematical questions in lessons.
- To consider the need to raise standards in numeracy;
- To consider current images of mathematics and mathematicians (students and teachers views);
- To consider the need for improving numeracy skills across the curriculum;
- To include staff that will promote partnership and development of skills within their area of expertise;
- To give ownership of numeracy by teachers across the curriculum leading to consistency;
- To promote a growth mindset effectively when approaching maths problem;
- To develop class teachers knowledge, skills and understanding of how numeracy can be embedded across the curriculum;
- To continue to encourage the development of partnerships between classroom teachers;
- To ensure that all staff have access to the appropriate teaching approaches and resources associated with numeracy.

Methodology

What are you going to do - what teaching approaches are you going to use?

- **Consistent approach to the use of calculation policy**
- Training teachers to improve strategies for teaching and learning of calculation strategies in Mathematical thinking.
- **Vocabulary**
 - Consistently implement bespoke and whole school interventions aimed at extending students vocabulary in mathematics
- **Whole staff training**
 - Specific staff to receive bespoke training on chosen interventions;
 - Working in partnership with other stakeholders;
 - Evidence based practice, implementation process through research lesson study group and CPD;
 - All staff to receive training on how to develop skills to asking mathematical questions in lessons

Implementation

- **Training**
 - Inter school collaboration as a part of peer support network



- Training programme for specific staff on mathematical thinking
- Whole school staff training on aspects of embedding numeracy across the curriculum
- Whole school staff training on how to use a calculation policy
- **Coaching**
 - Head of Department acts as coach to Focus group in implementing developed numeracy programme
 - Focus group to coach teachers/support staff/ intervention staff throughout the lifespan of the project
- **Educational materials**
 - Research for a new strategies of using mathematical thinking in different curricular areas and develop a common approach.
 - Online research to reading including specific vocabulary modules in mathematics for staff and students

Monitoring and Evaluations

- Staff to film good practice of the teaching of Numeracy which will then be shared between the foci group;
- The foci group will analyse observations of each non maths lesson and the impact it had on the students learning and development in mathematics;
- Project lead to monitor understanding and attitude of using numeracy across the curriculum– students’ and teachers surveys.
- On–going monitoring of numeracy in class (Weekly maths challenge) provided by Focus group

Outcomes

- All teachers are teachers of numeracy;
- Raised the standards of numeracy of all of Maplewell Hall School students;
- Develop domain specific thinking with maths in other subject by prompting student to think about subject content using the tools of mathematics;
- Increased access to maths resources;
- Teachers are equipped with the skills and resources to teach numeracy;
- Share good practice of numeracy across the school to enable the students to succeed at improving their mathematic skills;
- Baseline and continued assessments are effectively used to inform pupil’s next steps;
- Improved students’ social and emotional development, particularly confidence and self- efficacy.