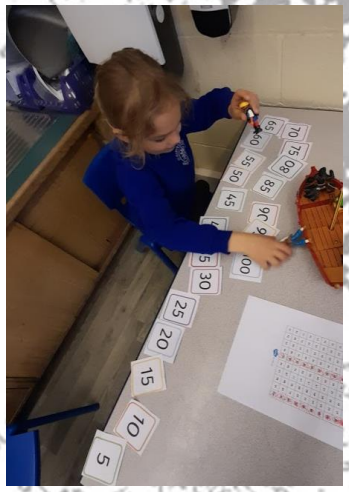
St Mary's CE School

Mathematics Policy



What is our Intent?

The 2014 national curriculum for **Mathematics** aims to ensure that all pupils:

- become **fluent** in the fundamentals of Mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- **reason** Mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their Mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

The National Curriculum for Mathematics

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The 2014 National Curriculum programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

How do we Implement Maths in our School?

All children are expected to succeed in mathematics. We have a significant focus on

- modelling good practice
- identifying patterns and connections
- teaching fluency and reasoning leading to problem solving
- developing mastery and adapting to different contexts
- providing a vocabulary rich environment

To support planning, we follow **White Rose Maths** supported by **Third Space Learning** resources.
A range of software and resources are available to support work with the computers. To support learning we invest in **Doodle Maths and TT Rockstars** to develop fluency and reasoning. Learning is enhanced by S.O.D.A (Start of the Day Activities) which secure learning based on Barak Rosenshine's principles.
https://www.aft.org/sites/default/files/periodicals/Rosenshine.pdf

We aim to provide **a Concrete, Pictorial and Abstract (CPA)** approach to contextualise learning. Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It is a core subject with a range of **cross-curricular links** but most often, is best taught discretely, using opportunities from other subjects to rehearse skills in a context. Numeracy involves developing confidence and competence in number work; shape, space and measure; handling data and the using and applying of these skills. To support this, we encourage **whole school events** to promote learning, linking parents and the school community and encouraging cross curricular links wherever possible.

What is the Impact?

Assessment and recording

Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Assessment in Mathematics takes place daily using a range of strategies such as marking and feedback of work and verbal discussions with children. This information informs subsequent planning and next steps in teaching and learning. Planning is annotated to demonstrate adaptations and provide feedback about children's individual/group progress. We are developing the feedback further to extend pupil's depth of thinking using a range of mastery questions.

The Mathematics subject leader keeps samples of children's work in a portfolio. This demonstrates work at various levels of achievement in Mathematics from across the school to help support teacher's in making their own judgements of levels. Teachers meet regularly to review individual samples of work against APP statements and moderate judgements.

Targets are set at the beginning of each year and progress towards them are regularly reviewed throughout the year. Records are collated to inform the school's School Improvement Plan (SIP) and Maths Action Plan. This tracking also includes half termly tracking of standards for each child. This data is used by the Maths Subject Leader to review Average Point Score (APS) and progress towards end of year targets.
The outcomes of regular assessments are recorded on Scholarpack for analysis.

Formal assessments specific to year groups:

Year	Assessment
Foundation stage	Attainment on entry Attainment on exit
Year 1	Teacher assessment – White Rose and Headstart Assessment
Year 2	KS1 SATs White Rose and Headstart Assessment
Years 3, 4, 5	Teacher assessment White Rose and Headstart Assessment
Year 6	KS2 SATs White Rose and Headstart Assessment

Health and Safety

Equipment will be used safely and appropriately. Specifically:

- Short pencils on compasses
- Pupils will not lift heavy objects or multiple weights in excess of 5kg to avoid strain to back muscles.
- Food products will be in date.

Reporting

Parent consultation evenings are held in the Autumn and Spring terms where children's progress and attainment will be discussed. All parents receive a termly written report on which there is a summary of their child's achievements.

Resources

All classrooms have a number of maths resources. Topic specific resources (such as weights and scales) are located in central storage areas.

Equity and Equality

We believe that equality at our school should permeate all aspects of school life and is the responsibility of every member of the school and wider community. We will always strive to ensure equality of access to maths for all

pupils irrespective of their gender, ethnicity, disability, religious beliefs/faith tradition, sexual orientation, age or any other of the protected characteristics (Single Equalities Act 2010)

Inclusion

Wherever possible we aim to fully include all pupils in maths teaching. Through our maths teaching we provide learning opportunities that enable **all** pupils to make progress. We set suitable learning challenges and respond to each child's individual needs.

Roles and Responsibilities

The Headteacher

- To actively support and encourage staff, praising good practise and supporting staff development, in-service training and resources.
- To monitor teaching and learning through lesson observations, climate walks and book review analysis and to give informative and constructive feedback.
- Support staff development through training and provision of resources.

Subject Leader

- To work with the Headteacher and the Senior Leadership Team to monitor, plan and develop the subject to allow for progression, continuity and high standards of attainment in Mathematics.
- To inspire a love and interest in maths.
- To support colleagues in the teaching of Mathematics and provide a strategic lead and direction in the subject.
- To manage periodic book reviews to ensure the curriculum is being covered and the marking policy is adhered to.
- To monitor progress in Mathematics, highlight and plan actions required.
- To take responsibility for auditing and organising Mathematics resources.
- To keep up to date with developments in Mathematics education and to inform colleagues as appropriate.
- To draw up annual action plan for Mathematics.
- To review the school policy for Mathematics as appropriate.

The Class Teacher

- To be responsible for the planning and teaching of Mathematics
- To manage and supervise their class' use of Mathematics equipment.

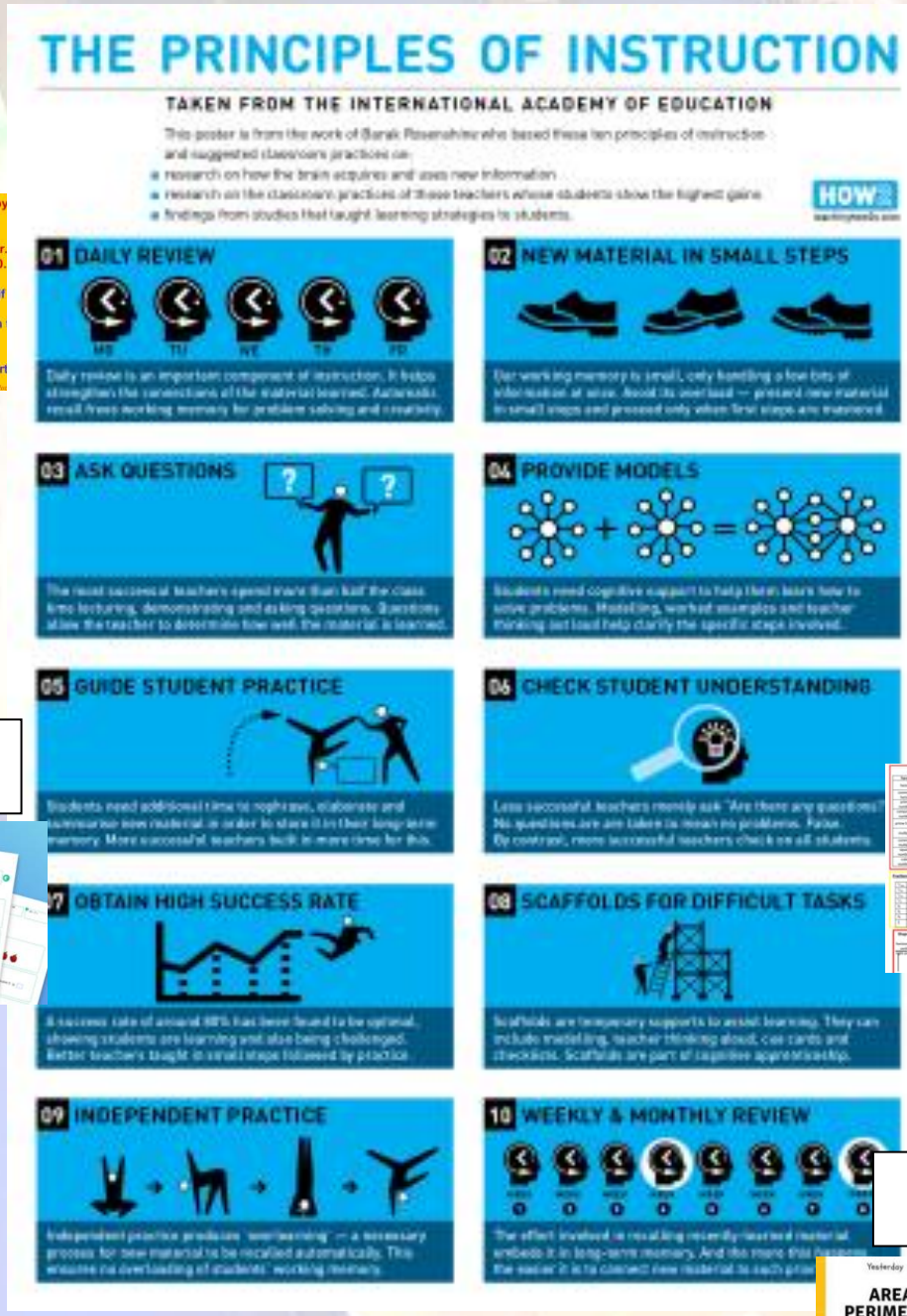
The Governors

- To appoint a named governor who has responsibility to oversee Mathematics and/or SIP foci for maths. They will meet with the subject leader to review development plans.

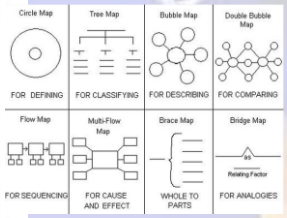
Appendix

1. List five numbers that will divide exactly by
2. Use 15 – 6 = 9 to work out 150 – 60
3. And what does 1500 – 600 ?
4. How do you know? Explain to your partner.
5. 9 + 1 = 10. List 6 more number bonds to 10.
6. Double 23.
7. How much change will Jack get from 50p if buys a 6p sticker?
8. Adam has 78p in his wallet. He finds 5p on floor. How much does he have now?
9. What is ½ of 30?
10. How much apple juice is left in a 300ml cart after 200ml has been drank?

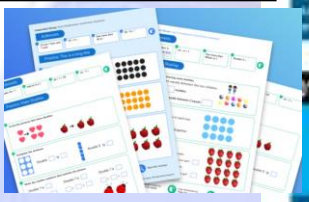
S.O.D.A
Start of the Day Activities



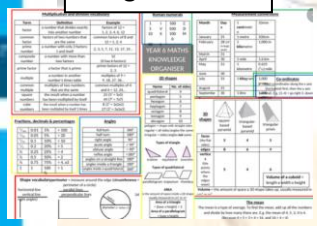
Thinking Maps



Assessment and Resources



Knowledge Organisers



Lesson starter