ST. MARY'S RC. PRIMARY SCHOOL | Love one another as I have loved you.

St. Cuthbert's RC. Primary School | WE LOVE, WE LEARN, WE GROW

What Mathematics looks like in the St Cuthbert's and St Mary's Federation

What a Maths lesson looks like in our school:

- Children are seated in mixed ability Kagan groups which allows children to work with different people over the course of time.
- A range of Kagan activities to develop cooperative learning.
- Lots of maths talk—reasoning
- Reasoning opportunities
- Problem solving throughout
- Mini plenaries to share misconceptions, pose questions, challenge ideas
- Free access to manipulatives/concrete resources
- Opportunities for self-evaluation and peer marking
- Learning power approach embedded in the feedback that the teacher and the children give each other.

This is how it works:

- Focus on mathematical language - key vocabulary displayed for children to see
- Many opportunities to talk mathematically
- Prove It!
- Children given time they need –may return to a task in following lesson – not 'compartmentalised' sessions but 'fluid'
- Teachers working with the most vulnerable pupils
- Daily 'Brain Training' - Basic Skills focusing on Counting, Four Rules of Number, Place Value, Doubling and Halving, Number Bonds, Balancing the Equals, Fractions
- Use of Whiterose materials to support a Singapore Approach to teaching mathematics
- Pre-teaching and/or immediate interventions (Teacher led) to prepare children for learning the next day
- Opportunities in the lesson for the children to reflect on which learning powers that they have used to overcome a problem and why

This is our philosophy:

- High quality modelling and scaffolding of skills leading to…
- Fluency of the method with…
- Reasoning at the heart of everything to facilitate…
- Mastery/Working at Greater Depth
- Concrete – Pictorial - Abstract approach
- Problem solving
- Cross-curricular links wherever possible
- Self and peer evaluation

This is what we do:

- Plan and teach maths lessons using the Whiterose Maths scheme which is a programme that supports the learning of maths through the building of knowledge, fluency, reasoning and depth.
- Teach a cumulative spiral curriculum, focusing on core topics to build deep understanding
- Scaffold in-depth learning of key mathematical concepts through the development of problem solving and critical thinking skills
- Provide extensive opportunities for practice of skills taught
- Positive use of mistakes/misconceptions- learning environment
- Regular book scrutiny, learning walks, planning audits, pupil perceptions, staff audit
- Whole school CPD including collaborative learning and cross school moderations
- Parental involvement
- Raised profile of mathematics in Maths days, My Maths and other e-learning applications

This is what you might typically see:

- Happy, engaged and reflective learners learners
- Self-motivated children
- Open ended investigations - low threshold/high ceiling tasks
- Word problems
- Different representations of calculations
- Paired/group work – lots of collaboration
- A range of different activities including practical and use of ICT
- Active maths where children move around the room and the outdoors
- Engagement and perseverance
- Children challenging themselves
- Children talking about, sharing and reflecting on their learning
- Children evaluating their own learning approach.

This is how we know how well our pupils are doing:

- Tracking
- Pupil progress meetings/Pupil conferences
- Teacher assessment/targets
- Marking and feedback (verbal, written, teacher, peer and self)

- Photo evidence of practical maths – well annotated either by child (KS2) or teacher (KS1) so that the journey of learning is clear including mistakes/misconceptions
- Targeted use of LSAs to note and record observations of individual pupils
- Standardised assessments from year 1-6