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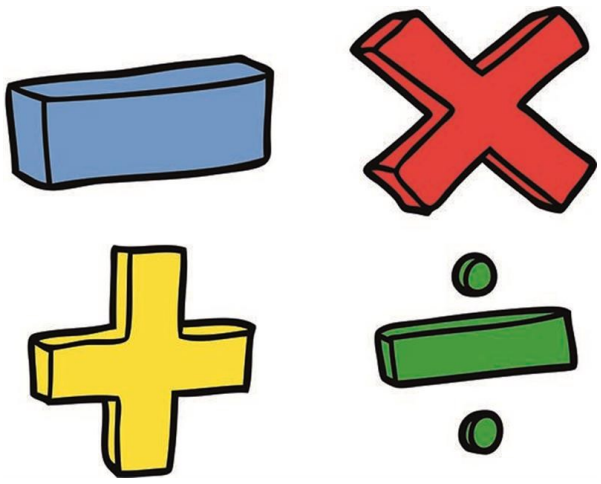
St Marys
Junior School,
Baldock
SG7 6HY

Maths at St Mary's Junior School

Intent and Implementation



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Maths Mastery

Intent

Maths is learnt through a mastery approach which means we aim for a deep, long-term, secure and adaptable understanding of the subject.

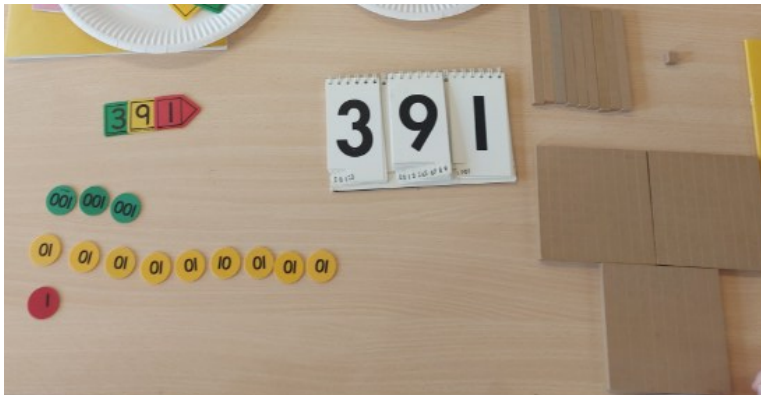
Implementation

At St Mary's Junior School, we follow the White Rose sequence for learning which breaks learning into progressive, and in-depth learning sequences for each mathematical concept.

Children learn concepts translating between concrete (materials and resources), pictorial (drawn representations) and abstract (e.g. written or mental calculations and language) representations.

Learning is broken into small steps which build on each other progressively. Teachers move children onto the next stage when they are secure with the prior concepts.

Mastery is then ensured by regular revisiting of concepts in different contexts, and by links to other mathematical and cross-curricular concepts.



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Reasoning and Problem Solving

Intent

Reasoning is interwoven throughout learning in maths.

Implementation

This is achieved through discussion activities, written activities, teacher questioning and feedback.

Children are given opportunities to apply mathematical understanding to a range of different questions and contexts which allows them to make links in their learning.

Reasoning can be presented by children in one of more of these ways: verbally; with resources; with pictorial representations; with calculations and numbers or through written explanations.

Spoken and written reasoning is modelled to the children by their teachers so that this becomes embedded. Use of co rect mathematical vocabulary is reinforced.

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Fluency

Intent

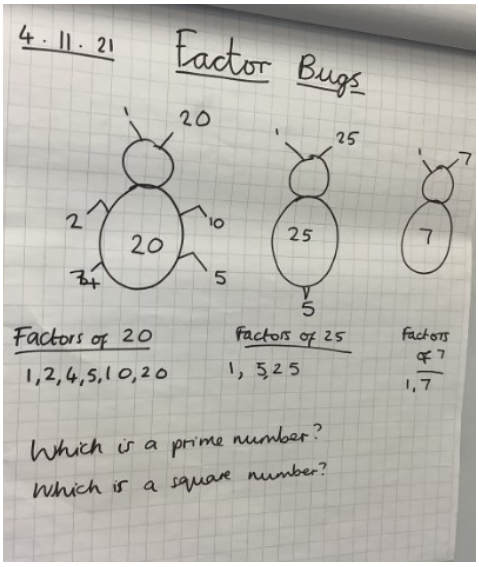
Children have opportunities to rehearse and apply their prior learning of key, high-value skills in maths so that they become fluent.

Implementation

Each class has regular, discrete sessions dedicated to fluency which is separate to the main maths lesson.

In these sessions, children will have opportunities to revisit and deepen their understanding of key concepts already taught from both previous year groups or within their current year group. These sessions are also used for pre-teaching of new learning of areas that have perhaps not been embedded in earlier stages.

High-value learning that will be covered in these sessions will include: place value and number, calculation, times tables, fractions and decimals, or other areas teachers identify based on assessment.



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Scaffolding

Intent

Learning is scaffolded effectively so that it is accessible to all children.

Implementation

All children within a class will have the same learning intention, but with appropriate 'scaffolds' to ensure that they are able to be successful.

Scaffolding can take a number of forms in maths. These include:

- Concrete manipulatives and resources
- Pictorial representations
- Adult support
- Pre-teaching before the lesson
- Scaffolded worksheets
- Working walls within classrooms

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Assessment and Progress

Intent

Teachers use assessment for learning to measure progress in their class, which is both formative and summative.

Implementation

Within lessons, teachers will identify which children require more scaffolding and further support prior to the next lesson. In addition, they will identify those children who are confident and provide them with 'Greater Depth' activities to broaden and deepen their understanding.

Our maths books demonstrate children's progress over time and teachers use these to gain evidence to make summative assessment judgements of their children, and to identify next steps in their learning. White Rose end-of-unit assessments and termly assessments provide summative assessment.

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Independent Learning

Intent

Through our mastery approach, we aim to develop independent and confident learners in maths.

Implementation

We use lots of talk in the early stages of learning with the aim that this becomes more internalised as time goes on as children are more confident with a concept.

In lessons, adults will use a ‘drop by' approach to support children with strategies to overcome barriers independently rather than overly relying on an adult working with them for long periods of a lesson. This may be through the use of concrete resources, or using other written or pictorial representations to aid them.

Teachers ensure that children are taught how to use different resources to aid their understanding, and how they can obtain them.

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Lessons

Intent

Maths lessons are based on the principal that concepts are chunked into small, well-paced steps of learning with an 'I do, we do, you do' approach.

Implementation

I do

Teacher-led modelling and instruction using different, purposeful representations.

We do

Children and teacher work on the new learning together. Opportunities for assessment for learning and adaptation.

You do

Children are given opportunities to rehearse the new learning through varied, well-chosen questions and activities that are progressive and involve reasoning. 'Pit stops' used by the teacher to address common misconceptions or deepen understanding where necessary.

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Learning Environment

Intent

Maths learning is supported by the classroom learning environment.

Implementation

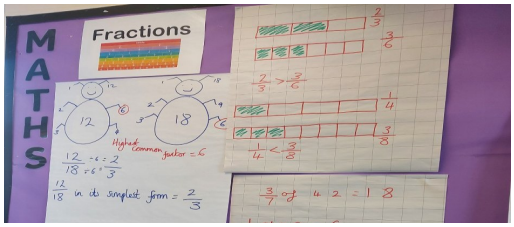
'Working walls' are developed throughout a learning sequence to provide children with reminders and scaffolds for their learning. Working walls sequence the journey through a learning sequences and are regularly added to and changed as children progress through the maths curriculum.

Working walls may include:

- Modelled examples by teachers or pupils
- Key vocabulary explained
- Concrete and pictorial representations
- Interactive questions and activities for pupils

Within classrooms, key high-value models will be displayed in addition to the current learning sequence. This may include:

- Place value charts
- Clock labels
- Number lines/squares etc



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Our Learning Values in Maths

At St Mary's Junior School, we have six curriculum drivers which underpin our teaching. They are:

Ambitious

Independent

Inclusive

Curious

Co-operation

Growth

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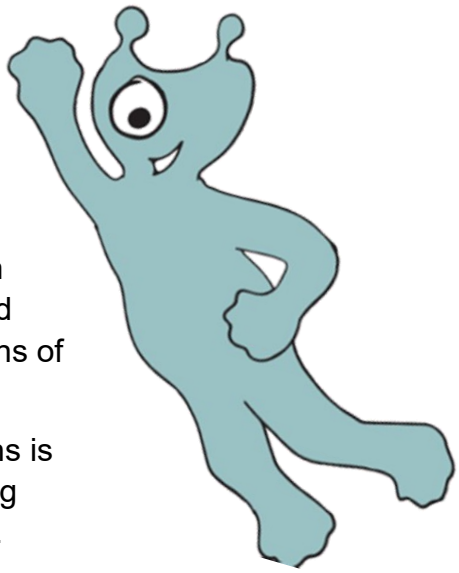
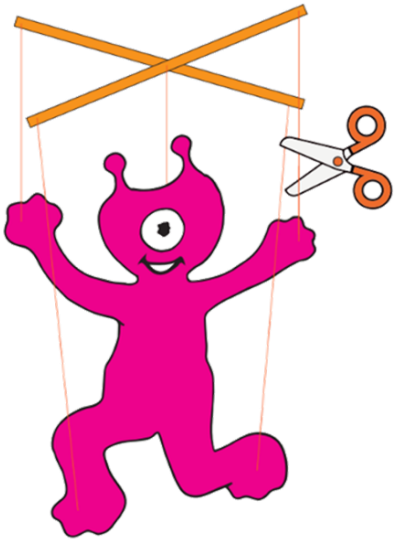
Our Learning Values

Ambition



- Children are excited to take on challenges in their learning and teachers have high expectations of them.
- Children understand how maths is used in the real world, including the world of work and industry.
- Children are confident to tackle each step of learning.



Independence

- Children take ownership of their own learning and use appropriate scaffolds to support themselves to succeed.
- Mistakes are viewed as positive and important to the learning process. Children are supported to learn from their own mistakes in their work, and through the mistakes of others.
- Children use mathematical talk to understand concepts.
- Children demonstrate resilience in maths lessons when things are tricky.

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Our Learning Values

Inclusivity

- Mistakes are viewed as positive and important to the learning process.
- Children understand that all children have the potential to complete greater depth activities.
- Children celebrate each other's success in maths, and support each other.

Curiosity

- Children thrive on exploration in mathematics.
- Children pose questions that enable them to deepen their understanding.
- Children enjoy and embrace open-ended mathematical activities such as 'What is the same, what is different?' or 'Which is the odd one out?'
- Verbal reasoning and discussion is integral to maths learning.
- Children are keen to share and compare methods and strategies for solving mathematical problems.

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Our Learning Values

Co-operation

◊ Children discuss in talking partners to share ideas, learn from each other and to rehearse and formulate answers.

◊ Children work collaboratively and sensibly with others to play purposeful maths games to develop understanding.

Children are keen to share and compare methods and strategies for solving mathematical problems

Growth

◊ Children understand that they need to persevere with challenges to help them learn and develop.

◊ Children understand how they are progressing in their understanding of maths.

◊ Children feel prepared for the next stage of their maths education when leaving us at the end of Year 6.