



Maths at St John's C of E Primary School



To follow **BOUNDARIES** given during lessons.

To be **RESILIENT** if I struggle or find things challenging.

To **FOCUS** on what I already know and how this can help me to learn new concepts or deepen my learning.

To **RESPECT** my right to learn and the rights of others to learn in lessons.

To **SELF-REGULATE** and monitor my progress when working through something challenging.

To be **INDEPENDENT** and use resources to help me solve problems.

LOVE rising to the challenge of applying Maths learning in different contexts.

RESPECT our peers by listening to them, working collaboratively.

Show **COURAGE** when faced with new learning and applying my learning in different contexts





School Vision:

St John's Gosport Church of England Primary School endeavours to provide a happy, safe, caring community rooted in Christian values; where everyone is valued and grows to their full potential.

John 10:10 – I came so that they may have life – life in all its fullness

Mission Statement:

At St John's Gosport Church of England Primary School we aim to achieve our vision by providing a broad balanced curriculum and learning experiences that develop our children in body, mind and spirit; setting high standards for all, confident that we can achieve success. Thus ensuring that when our children leave us they are independent learners, who are well equipped to be responsible citizens of the future and reach their potential

The context of our school

St John's C of E Primary School is a two-form school with higher-than-average levels of SEND and Pupil Premium. It is essential that our approach to teaching mathematics is accessible to all learners, regardless of background and that it promotes children to approach mathematics with an inquisitive mind from the very beginning of their school journey.

Equal Opportunities

At St John's C of E Primary School, we ensure that all children are provided with the same learning opportunities whatever their social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to Maths and all staff members follow the equal opportunities policy. Resources for SEN children and Gifted & Talented will be made available to support and challenge appropriately.

- We value the individuality of all our children. We are committed to giving our children every opportunity to achieve at the highest of standards.
- We offer a broad and balanced curriculum, and have high expectations of all children.
- We seek to ensure that all pupils have equal access to the full range of educational opportunities provided by the school.
- We constantly strive to remove any forms of indirect discrimination that may form barriers to learning for some groups.

- We value each pupil's worth, we celebrate the individuality and cultural diversity of the community centred on our school, and we show respect for all minority groups.
- The achievements, attitudes and well-being of all our children matter.

Intent, Implementation and Impact

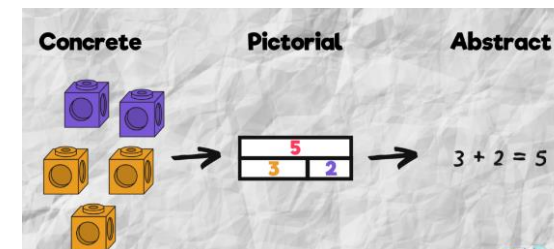
As a Church of England School, our core Christian Values of *Love*, *Courage* and *Respect* are deeply embedded into our school ethos. The Maths curriculum at St John's Primary School reflects these values. From the moment children join our school in EYFS, they are exposed to rich mathematical experiences that challenge them to question and problem solve, thus preparing them for the next stage in their mathematic education. Children are encouraged to be advocates for their own learning, independently selecting resources to assist them in being resilient in the face of mathematic challenges. Children and staff live and breathe our Christian Values every day, in every lesson.

At St John's Primary School we believe ***all children*** can achieve in Mathematics. We aim to develop children who are confident, numerate learners and able to apply and use these skills in everyday life. In line with the aims of the National Curriculum, we aim to ensure that all pupils:

- Become fluent in the fundamentals of Mathematics
- Are able to reason mathematically
- Can solve problems by applying their Mathematics



Mathematics is integral to all aspects of life and we endeavour to ensure that children develop a healthy and enthusiastic attitude towards Mathematics; an attitude that will stay with them to encourage enquiring minds, entrepreneurial thinking and economic wellbeing. We achieve these, in part, through use of the **Concrete, Pictorial and Abstract** approach as children ***talk about, investigate and represent mathematical concepts.***



Emphasis is placed on children gaining both the conceptual and procedural understanding of a concept, at a level that is appropriate for them. We use misconceptions and mistakes in learning as a driver to secure the children's understanding as well as ensuring they are provided with sufficient challenge through the use of rich and sophisticated problems. Children show their understanding through their ability to apply their learning in different contexts and represent their working in multiple ways.

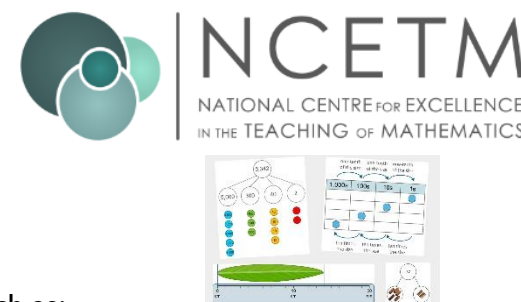
Implementation

What do we teach? What does this look like?



The design and implementation of our spiral curriculum is shaped and created to enable all children, regardless of ability, age and background, to flourish and achieve their very best. Through the use of the National Curriculum and clear skills progression through and within year groups the curriculum we offer will be engaging and challenging for all. The design of the Mathematics curriculum is created through the use of the following key documents:

- HIAS Unit Plans which set forth the Learning Objectives, sequence and progression for learning
- NCETM's Ready to Progress Criteria
- NCETM's Spine Materials



These key resources enable teachers to exercise their professional judgement to create engaging lessons that are pitched correctly for their learners.

Teachers are encouraged to explore other quality Mathematic resources when planning units of work, such as:

- Gareth Metcalf's I See Resources
- Nrich
- White Rose

The planning of mathematics is conducted in the following three phases:

1. **Long-term planning:** This is an annual overview provided by HIAS and details when domains and their content will be taught. This long term plan ensures that learning is progressive within and across year groups. Careful consideration is then given to the children's starting points and adapting this as necessary through the use of both formative and summative assessments.
2. **Medium-term planning:** This is the development of a learning journey for a unit of work. This includes carefully considering the children's starting points/previously acquired knowledge and skills. This is made explicit to teachers through the use of a unit 'Entry Ticket' which assesses key prior knowledge children require to be successful in the upcoming unit. Teachers use this valuable source

of assessment to then plan their proceeding journey, with the children's needs at the forefront. Each unit is brought to a close with an 'Exit ticket' which provides a snapshot assessment into the learning that has taken place throughout the unit. Maths at St John's aims to provide the children opportunities to develop the 3 aims of the National Mathematics Curriculum; Fluency, Reasoning and Problem-Solving and this is reflected throughout each journey.

Each Maths unit has a "lead" and "supporting" domain. Learning objectives are planned into the learning journey, giving careful consideration to the "small steps" and the order/sequence of which the lessons are taught. Teachers are supported by the HIAS plans to do this, detailing the objectives and key facts to be taught.

3. **Short-term planning:** This is the daily planning of lessons, whereby tasks are designed and varied in order to reach the needs of all children within the classroom, providing sufficient support and challenge.

Lesson Structure

Teachers will have a flexible approach to the structure of their Maths lessons but with an overall aim of addressing and reaching the needs of an ambitious and challenging curriculum. Throughout all stages of a lesson, children are encouraged to articulate their thinking and respond to carefully planned questions designed to gauge understanding and make the children think deeply about a maths concept. The use of 'Agree, Build, Challenge' provides a structure that children know and use to 'air' their mathematic thinking. Where possible, marking will take place within lessons to ensure that misconceptions are addressed in a timely manner and errors are corrected before the learning moves forward.

Lesson Design

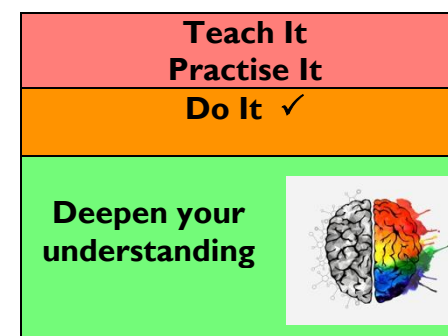
1. Retrieval Practice

5-10 minutes of independent practice time to revisit and consolidate a previously learnt skill/concept/key fact

In KS1 this is 1 retrieval question

LKS2: Last lesson, Last Week

UKS2: Last lesson, Last Week, Last Term.



2. **Teach It:** Introduce and discuss learning objective followed by explicit modelling of a mathematical concept/procedure (I do)
3. **Practise It:** “We do’ where teachers use AfL to check and clarify early misconceptions
4. **Do It:** Independent practice (You do)
5. **Deepening:** Opportunity to apply skills in a different context and challenge and deepen their thinking at their level (e.g. Always, sometimes never, what if..., if this is the question, what is the answer, what is the same/different etc.)

The order in which these “phases” of the lesson are taught is flexible and should be thought about by teachers prior to the lesson to ensure they are meeting the needs of their classes.

The children will all have opportunity to challenge and extend their thinking within a lesson and should take responsibility for moving their own learning forward; i.e. recognising if a task feels too easy or seeking out classroom maths resources if something feels tricky. Children are encouraged to reflect on this every lesson with some form of structured reflection.

Key Number Facts

- Mastering Number KS1

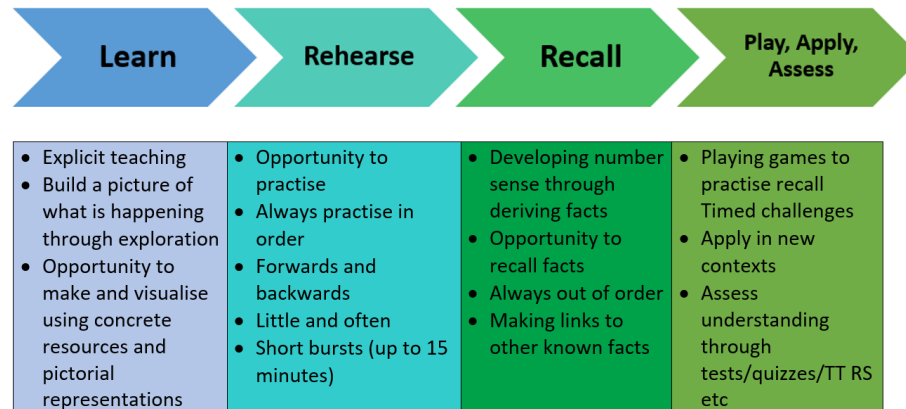
With the intention of developing strong number sense, children participate in the Mastering Number programme throughout KS1. We aim to ensure children leave KS1 with fluency in calculation and are able to work flexibly with number. This provides a sound foundation for their learning in KS2.



- Counting/Times Tables

At St John’s, we have developed a whole school approach to the teaching of times tables; Learn, Rehearse, Recall, Play/Apply/Assess. Teachers dedicate 2 whole class lessons each half term to the ‘learn’ phase for their focus times table. We recognise the importance of developing children’s conceptual understanding and therefore always begin in this phase, providing children with practical opportunities to make and visualise with concrete and pictorial representations. All children are provided with a Times Table Rock Star log on and encouraged to practise their tables at home, as well as school.

2 weekly retrieval activities are then provided to give children opportunities to engage in repeated practise and consolidate facts.



Impact

What will this look like?

By the time children leave St Johns, they will show confidence in their ability to **fluently** recall key number facts and be able to use these flexibly and accurately to apply their learning to more complex **problem-solving** tasks, drawing on their **reasoning** skills to justify and support their line of enquiry. They will be increasingly confident, metacognitive mathematicians who demonstrate resilience towards mathematical tasks. They will be able to talk precisely about their understanding, showing both their conceptual and procedural knowledge supported by the use of concrete and pictorial representations. Children will express an enjoyment in tackling mathematics and challenging themselves to be their best in this area.