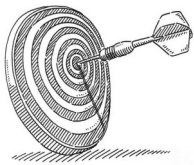


Maths

At Scartho Junior Academy, we pride ourselves in our ability to deliver an ever evolving Mathematics curriculum (including financial literacy), which is rich in both knowledge retention and practical hands-on experiences.

Our cyclical curriculum nurtures future problem solvers, deepens their understanding of relationships between number and builds a resilience to reason mathematically. Ultimately, we aim to ignite a passion for mathematics which fosters cross-curricular learning possibilities and impacts the real world around us, including the local community and future employment possibilities.



Intent—We aim to...

Become fluent

In the fundamentals of Mathematics

Reason

Mathematically

Problem solve

Follow a line of enquiry

Develop a conceptual

understanding of number with the ability to recall and apply knowledge rapidly

Encourage children to develop an argument using **Mathematical language**

Investigate

the hidden beauty of number through **the relationships and patterns** numbers forge.

Ignite a **passion for Mathematics** and foster an understanding of its perpetual impact on the world around us.



Implementation—How do we achieve our aims?

Cyclical Curriculum

At SJA, we understand that prior learning is central to learning and therefore we advocate the importance of a cyclical curriculum to allow children the opportunity to revisit areas of the curriculum to improve their understanding or to deepen their learning. Consequently, we have created individualised, cyclical year group overviews which are specific to the needs of each year, to encourage reinforcement of previously-learned concepts, which ultimately, promotes greater retention of skills moving up through the school. It also focuses teachers to structure work to follow a logical progression.



Daily Arithmetic

In order to become fluent in the fundamentals of Mathematics, children need to revisit a skill over and over again to become competent. At SJA, every class completes a daily 5in5/10in10 maths activity. This activity consists of 5 or 10 purely arithmetic questions within a 5/10 minute period. The questions are taken from Maths Shed but the questions can be adapted to suit the needs of each class. For example, the questions can be adapted to reinforce the previous days/weeks learning or pre teach learning which will be coming up in the future. Teachers also add in bonus questions for higher ability children if completed. The challenge is not only to complete the questions correctly but at speed allowing them to become fluent arithmetically. This will support them moving up to year 6, in the arithmetic test but once they have mastered arithmetic., they can apply this understanding to reasoning based problems. This activity is separate to the main maths lesson.



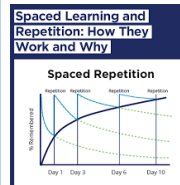
CPA—Concrete/Pictorial/abstract



The Concrete Pictorial Abstract (CPA) approach is a system of learning that uses physical and visual aids to build a child's understanding of abstract topics. Pupils at SJA are introduced to a new mathematical concept through the use of concrete resources (to facilitate this, we have a range of mathematical resources in classrooms including Numicon, Base 10, counters and number lines). When they are confident in solving problems with physical aids, they are given problems with pictures. Then they are asked to solve problems where they have only the abstract (e.g. numbers or symbols). Building these steps across a lesson can help pupils at SJA better understand the relationship between numbers and the real world, and therefore help secure their understanding of the mathematical concepts they are learning.

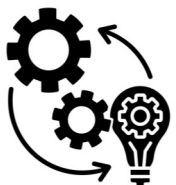
Embed Retrieval practice Using Spaced Learning

At SJA, we incorporate retrieval practice and spaced learning into our Maths curriculum and day to day activities. Spacing learning and retrieval practice can improve students' long-term retention of their learning. Spacing is the practice of sequencing learning so that information is delivered across two or more periods rather than just one. Retrieval practice is the strategy of getting students to actively recall their learning so that they can eventually move it from their short term memory to their long.

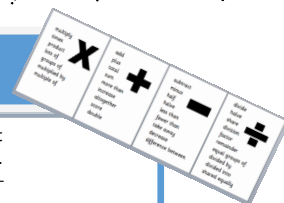


Subject on a Page

Maths



Implementation (continued) - How do we achieve our aims?



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Clear Language Progression Through The School

At SJA, we as a staff, have agreed upon a set of clear and consist language prompts that we use to produce our learning objectives across all year groups.

To learn-to understand, first time the skill has been attempted. **To develop/know** - practise the skill. **To apply** - reasoning skills. **To revisit** -revise, recap a skill.

These prompts allow for consistency across the school and also highlight to children, not only what they are learning, but whether it is new information, practised, applied or revisited.

Alongside this, another non-negotiable is that every maths book will have year group appropriate language within it, whether that be in 'book ends' or highlighted off at the front/back of the book in the form of a knowledge organiser.

Consistent Summative And Formative Assessment to Narrow Gaps



Summative:

At SJA we have a consistent summative assessment framework, with teachers testing at the end of each term. This test can then be used to inform teacher assessment alongside classroom practice.

Formative:

Teachers provide ongoing feedback within lessons to support child understanding. This can consist of in class marking or stopping the lesson to check understanding on the IWB. At the end of every lesson, children have the opportunity to self-assess their work. At SJA, we have agreed on a consistent approach to facilitate this: **Tick plus** – very confident with the concept, ready to move on to the next step of learning, **Tick** – Achieved the aim of the lesson, a couple of mistakes but overall understands the concept and **Tick Arrow** – Struggled with the work and would like extra support/help.

To close the assessment loop, after the child has self-assessed ,the teacher will use the same tick method using pen and then write an appropriate comment if the child has written a tick arrow.

✓ Impact—How will we know we have achieved our aims?

Most children will reach end of year expectations, with some excelling into Greater Depth

Maths books will reflect the expectations of **what a Great Maths Book looks like at SJA**

Maths books will **reflect** the learning journey the child has been on throughout the year

Children's progress is **tracked termly** using end of term assessments.

Children are reasoning with increased **confidence** and accuracy

Children are able to independently **apply** their knowledge to a range of increasingly complex problems

Well planned sequences of learning **support** children to develop and refine their maths skills

Children are able to use the correct **mathematical language** to reason their argument

LIFE IS A MATH EQUATION.
IN ORDER TO GAIN THE MOST,
YOU HAVE TO KNOW HOW TO
CONVERT THE NEGATIVES
INTO POSITIVES.

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