INTENT, IMPLEMENTATION AND IMPACT STATEMENT FOR MATHS AT SJG

The national curriculum for mathematics aims to ensure that all pupils:

1. 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;
2. Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;
3. 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.

**INTENT**

At St John’s Green Primary, we want children to be confident capable mathematicians.

We want children to be able to enjoy the rigour of maths, the joy of discussing their methods with each other and the excitement of solving problems. We use the White Rose Maths scheme as a basis for planning our maths curriculum, supplementing with other resources where necessary, and adapt this according to the needs of the children, based on gap analysis from summative assessment, ongoing teaching judgements and pupil feedback. We aim for children to achieve mastery in mathematical fluency, reasoning and problem solving, whilst using age-appropriate mathematical vocabulary to explain their methodology. . We aim to prepare children to access KS3 content on leaving us and to engage in real-life problem solving.

Children explore the Concrete, Abstract and Pictorial forms of maths at their current level in that maths strand, regardless of their age. Teachers and children use SOLO taxonomy as a way of articulating their understanding and for describing their progression through a block of maths learning.

We encourage children to employ their Learning Powers of Collaboration, Motivation, Resilience, Making Links and Reflection in order to be successful mathematicians. We recognise that maths can be a struggle for some children and we adapt their activities accordingly, whilst celebrating their successes by breaking the learning down into small steps.

**IMPLEMENTATION**

Children learn how to become fluent in using the four operators to carry out basic calculations. They build on their number knowledge and practice how to calculate using larger numbers and decimals, using informal and formal methods. They are given a wide range of resources to use in order to achieve mastery by the end of each year group. New concepts are introduced through concrete resources while jottings of standard models and images that support manipulative use are encouraged.

Teachers do not rush children through to abstract recording of calculations, they take time to ensure that children have grasped the concept first. Teachers’ expertise in maths strands are used to support the professional development of other teachers and support staff. The Maths Subject Lead coordinates whole school, key stage, year group or individual professional development based on monitoring of pupil books, teacher feedback, lesson observations, gap analysis from summative assessments, new pedagogical research and most importantly children’s attitudes to mathematics.

Children studying maths below age-related expectations are helped to catch up with their peers through structured support, either in groups or through individual support. Maths learning is underpinned by high quality teaching, use of White Rose Maths scheme materials and encouragement by all adults in the classroom to ‘give it a go’.

**IMPACT**

Last year a focus on using Bar Modelling as a way of visualising worded maths problems resulted in termly professional development delivered by the maths subject lead. Teachers and other adults in the classroom learned together in year groups and supported each other under the guidance of the MSL. Use of bar models to support visualising a worded problem is now embedded across the school, teachers report that children who are attaining at below age-related expectations have a known starting point to problem solving through bar modelling and consequently experience success in reaching a solution.

Teachers identified gaps in children’s mathematical learning, and worked diligently to supplement the curriculum with more resources, more discussion to scaffold children’s reasoning methods, more use of the Learning Pit and Learning Powers to get ‘unstuck’ and boosting their own knowledge on progression of mathematics through the Key Stage.

**End of Year Outcome Y1 vs Y2 Comparisons (current Y3 pupils)**

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| --- | --- | --- | --- |
|  | At or Above | Above | Impact |
| End of Y1 | 55.4 % | 19.3 % | *12.1 % increase for ARE**3.6 % decrease for ARE+* |
| End of Y2 | 67.5 % | 15.7 % |
|  |
| **End of Year Outcome Y5 vs Y6 Comparisons (current Y7 pupils)** |
|  | At or Above | Above | Impact |
| End of Y5 | 49.4 % | 29.9 % | *8.4 % increase for ARE**7.7% decrease for ARE+* |
| End of Y6 | 67.8 % | 22.2 % |

Analysis indicates that more children who were just below expected standard were helped to reach the standard in the two year groups of Year 2 and Year 6. This appears to be at the expense of the children who were a year before assessed as being above the standard. Going forward - staff training, monitoring and lesson observations will have a focus on challenge for those children who have achieved mastery, so that they can move on to explore deeper maths concepts and apply their learning in a variety of different contexts.