



MATHEMATICS VISION STATEMENT

Intent

At Sir John Sherbrooke Junior School, our mathematics program promotes an environment in which students develop a comprehensive and enduring understanding of the concepts of mathematics. Students learn to effectively apply these concepts and use a variety of reasoning and problem-solving strategies. The program nurtures a productive disposition toward mathematics and challenges all learners. Our aim is to build mathematicians who enjoy maths, do not fear it, and are able to 'talk maths' using rich vocabulary. We want our children to say: 'why', 'how', 'I know this because', 'another way to solve that is...', 'I can check this answer by...' and 'they have made this mistake...' All children will make progress in every maths lesson. All staff will subscribe to and enjoy teaching maths as a multi-layered and open-ended vocation, full of conceptual variation and rich language.

Implementation

Every class from Y3 to Y6 follows the White Rose scheme of learning, which is based on the National Curriculum. In order to further develop the children's fluency, reasoning and problem-solving, we use Deepening Understanding which correlates to the White Rose lessons and further develops children's understanding of a concept and the links between maths topics. We also use a range of planning resources including those provided by the NCETM and NRICH to enrich our children's maths diet. We have Start of Day Activities (S.O.D.A) in each class whereby children are set a task to ensure general maths knowledge and fluency are maintained and developed; these may take many forms, for example: arithmetic, specific times tables or several questions about a mixture of maths topics. While the class are solving the questions, the staff are able to support children with consolidation or pre-teaching ensuring they are confident with skills required for the upcoming session. Each lesson contains a careful mix of intelligent practice: fluency facts; conceptual and procedural variation; CPA; intelligent questioning; misconceptions explored; scope to problem-solve throughout; use of manipulatives where useful; STEM sentences throughout; regular short, sharp tasks. We implement our approach through high quality teaching delivering appropriately challenging work for all individuals. To support us, we have a range of mathematical resources in classrooms including Numicon, Base10 and other concrete equipment. When children have grasped a concept using these manipulatives, images and diagrams are used (pictorial) prior to moving to abstract questions. Abstract maths relies on the children understanding a concept thoroughly and being able to use their knowledge and understanding to answer and solve maths without equipment or images. We continuously strive to better ourselves and frequently share ideas and things that have been particularly effective. We take part in training opportunities and regional networking.

Impact

Through discussion and feedback, children talk enthusiastically about their maths lessons and speak about how they love learning about maths. They can articulate the context in which maths is being taught and relate this to real life purposes. Children show confidence and believe they can learn about a new maths area and apply the knowledge and skills they already have. Language such as 'tell me', 'describe', 'why', 'explain' and 'I know this because' are commonly used and heard. Pupils know how and why maths is used in the outside world and in the workplace. At the end of each year we expect the children to have achieved Age Related Expectations (ARE) for their year group. Some children will have progressed further and achieved greater depth (GD). Children who have gaps in their knowledge receive appropriate support and intervention.