

Mathematics at St Michael's



What you can expect to see in a maths lesson:

- All children working on age related content
- Precise use of mathematical language
- Careful and precise facilitation of learning by teachers
- Learning partners that are of mixed prior attainment, but with a narrow differential
- Enthusiastic, resilient learners who can talk confidently about their maths
- Growing fluency and number sense
- "Rapid graspers" will challenge and deepen their own thinking without waiting for adult stimulation

- Maths lessons follow the structure of:
 - Explore
 - Structure
 - Journaling
 - Guided Practice
 - Intelligent Practice
 - Dong Nao Jin

- During the **explore** phase you will see children exploring an initial problem that the teacher has prepared within the context of today's lesson. Children may have manipulatives out on the table or may have models or images that expose the structure of the lesson. During this time, teachers will circulate and differentiate by scaffolding children's access or extending children's thinking. Teachers will also encourage children to go deeper by asking for other methods or "what if?" The teacher will also identify examples of work that will be shared during the structure part of the lesson.
- During the **structure** phase, the teacher will draw attention to different methods of solving the problem. Before the lesson, the teacher will have already identified one or two ways that are desirable (efficient or elegant) that will be used here to expose the structure of the maths. If these methods are not naturally exposed by the children, the teacher will use the next slides in the PowerPoint to discuss efficient or elegant methods.
- **Journaling** - Children have time to journal any additional methods that they have seen and extend their Mathematical thinking.
- **Guided Practice** - The teacher asks children to look at some practice on the board and "step in to the shoes" of the person whose method we will practice today (the desirable method). Guided Practice is completed alongside the children not for the children. Here you will see Ping-Pong style teacher, me then you, me then you. Guided Practice may be oral practice or written practice, depending on the context of the lesson.
- **Intelligent Practice** - Intelligent practice is structured variation of the initial task and guided practice which further exposes the structure of the mathematics. All children have the same Intelligent Practice and complete independently.
- **Dong Nao Jin** - Chinese for "Use your head". Children are all given a problem to solve which focuses on them applying what they have learnt that lesson.

- Presentation and books - You will see a success criteria for each lesson that outlines key focuses for the children to embed our school learning values and expected working practices in maths. Children record their own date in short numerical form and the equivalent of a learning

objective in the form of "We are learning to". Intelligent practice may be a worksheet or problems and teachers vary this. Worksheets exude high expectations. Intelligent practice will have a title which identifies the key learning outcome. Children are expected to have high expectations in their presentation and use a ruler for all lines.

What you may see in a maths lesson

- Teachers/other adults may pull a focus group to them during journaling time, or after guided practice.
- On occasion, you may see teachers focus teach an individual child or group of children who are performing significantly behind age related expectations in this strand of mathematics or who need short, focused intervention. This work may be largely practical and may explore some concepts that are building blocks within the context of the lesson.
- You may see teachers asking children to internalise and visualise mathematical structures by using models and manipulatives "in their head". This is a move towards the teachers expecting children to abstract the maths.
- You may see teachers plan "in the moment". If there are issues around prior learning or access to content that are widespread, teachers may stop the lesson and explore the concept from a different angle or explore a smaller step in learning rather than moving on to Intelligent Practice.

What you won't see in a maths lesson

- Fixed table groups or ability groups
- Differentiated tasks