What does Maths look like in our school?

Mathematics - Main Lesson Design

EYFS

In EYFS, “Maths in our routines” is an overarching mind-set adopted by all staff. Children are encouraged to explore Mathematics in context, regularly highlighting where Maths is in the world around us. Four whole class Maths lessons will happen each week (20 minute input from White Rose Maths), involving whole class teaching followed by provision activities (during which, immediate intervention takes place for those individuals displaying misconceptions during the input). Subsequent lessons are consequently adapted according to how the pupils have accessed the provision.

Incidental Maths happens continuously and pupils are encouraged to apply their mathematical understanding during their play. Provision activities during other times of the week will include pre-teaching for the next week’s concept as well as re-capping previous whole class sessions. To ensure that pupils are prepared for the whole school approach to Mathematics, during the Summer term, questions are carefully planned in so that regular opportunities are given for the pupils to secure and deepen their understanding. Pupil understanding is evidenced through a whole class floor book as well as inputting information to Tapestry.

EYFS > Year 1 transition (Autumn 1)

In our Year 1 settings, the first Autumn term will consist of allowing pupils to make choices about their mathematical learning. Like the whole school, a small step will be focused on each day but the children may choose to respond to this in different ways. They are offered the opportunity to complete the ‘Do It’ task directly into their book but they may choose to respond through art, role play or other practical activities. This is to ensure that a transition period occurs between continuous provision and formal mathematical learning as well as to allow opportunity for those pupils with gaps to achieve their GLD.

Years 1-6

Across the school, we teach the whole class so that everybody follows the learning journey together. Every lesson will be focused around a specifically-written ‘WALT’ (learning objective). The learning journey will be tracked across the ‘Working Wall’ and key concepts/methods/mathematical vocabulary will be clearly displayed to support pupils’ learning. The learning journeys will follow ‘manageable steps learning’ – where the learning objectives are tightly focused and measurable within one lesson. Differentiation occurs through the use of adult support as well as immediate interventions during the ‘Maths Meeting’ session later that day. These may include pre-teaching mathematical concepts/vocabulary as well as immediately picking up on any areas that an individual pupil found challenging.

We follow a lesson design that is based around a short input, followed by three tasks that are labelled as ‘Do It’, ‘Secure It’ and ‘Deepen It’. We ensure that these tasks are not approached as a ‘race’ to get to the last one and we use our growth mind-set work to support this. The ‘Secure It’ or ‘Deepen It’ task will often be explored during a plenary so that all pupils have been exposed to problem solving and reasoning, daily.

‘Do It’ tasks
These are our fluency based tasks. No more than six should be expected from this, unless more evidence is needed of a pupil’s understanding. These may include self-selection questions or varied fluency. These questions focus on what the maths ‘is’ and also what it is ‘not’.

‘Secure It’ tasks
These tasks will be securing the learning that takes place. They may take the shape of a ‘True of False?’ question, a multiple choice answer or a ‘Spot The Mistake’ problem. Many of these tasks should require the pupils to explain their thinking.

‘Deepen It’ tasks
These tasks will be challenging pupils to access the ‘Greater Depth’ elements of the curriculum. ‘Deepen It’ activities will be applying the mathematical concept learned to a new context and require pupils to solve a problem using what they have learned. These may include problems that have more than one answer as well as requiring pupils to be able to explain their reasoning accurately.

Pupils will be allowed to use maximum space to explore their thinking and respond to these tasks within their Mathematics book. They will often be expected to use numbers, drawings and words to explain their thinking.

Mixed year group settings

In our mixed year group settings, children are taught within their year group. The structure involves the year group splitting out into a different classroom to ensure clarity.

Live feedback is utilised to ensure that pupils are always approaching a task that is most suitable to their learning need. Some pupils may need to continue on the fluency tasks past the six provided, others may only need to complete two of these questions – this is up to the teacher's discretion as to whether more confidence is needed with the concept. This may sometimes involve questions such as 'Can you show me another way?' or 'Prove it' where pupils will respond – this may also be during feedback time outside of the Mathematics lesson.

Assessment

Formative assessment takes place regularly and any pupils who have not understood the small step objective for that lesson may need to receive immediate intervention during the Maths meeting session so that they are ready to proceed with the learning journey in the next Maths lesson. Years 1-6 complete an assessment entitled 'Remember It' which assesses the children's understanding from that half term's learning. This is then utilised when planning the next half term's deliberate practice sessions during Maths Meetings (see below).

Maths Meeting Sessions

Key Stage One – 'Mathemagicians' **Key Stage Two – 'Maths Meeting'**

This is a session that is discrete from the main Mathematics lesson and is dedicated to pupils practising their mental maths fluency, arithmetic skills and knowledge of numbers. Like our main Maths lessons, we follow the structure set out by 'Can Do Maths' when identifying focus' for the session. One/two sessions a week are dedicated to deliberate practice and these are mapped out according to the areas that need developing which are identified through the previous half term's Remember It assessment.

Both Key Stages have access to 'journals' which they can use during their 'Maths Meeting' time to explore their own understanding. These books are unmarked and personal to pupils however, teachers can access these to take evidence from when assessing if needed.

How does Mathematics teaching and learning respond to the SMSC needs of the school?

SMSC	
Spiritual	**Maths Challenge –** aiming high for all pupils and setting self-challenge, exploring patterns in the world around us **Self-reflection** and adopting a growth mind-set when doing so **Rising to the challenge** and having faith and belief in self when working through DSD activities
Moral	**Self/peer marking –** trusting when somebody may be correct/incorrect **Mutual respect** when pupils are agreeing/disagreeing during SECURE IT tasks and offering reasoning to support ideas during mathematical debate
Social	**Responsibility** to be a good and fair citizen in an active community – encouragement of random selection during Maths teaching rather than constant hands up or deliberate choice of specific pupils **Self/peer marking** **Maths Challenge –** working together within an active community towards one shared goal
Cultural	**Open discussions** about method choice and respecting the different methods of others – accepting that what works for one may not work for another, linking P4C approach to discussions in school