

Bevendean Primary School and Nursery

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A place for everyone to succeed and thrive

At Bevendean Primary School and Nursery, we are committed to providing our children with a curriculum that has a clear intention and impacts positively on developing them as a learner.

<u>Curriculum statement for the teaching and learning of Maths</u>

At Bevendean Primary School and Nursery, we intend to provide a high quality Maths education that provides opportunities to develop mathematical understanding. We intend to provide a rich and balanced curriculum, which caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to become successful in their future learning. The National Curriculum provides the structure and skill development for the Maths curriculum, supported by varied and high quality activities with a focus on fluency, reasoning and problem solving, which has then been developed by the teachers, to ensure we provide pupils with a range of experiences through engaging and stimulating lessons.

We understand the importance of a CPA (concrete, pictoral and abstract) approach to teaching and learning.

We want to ensure there is a mastery approach embedded from EYFS to Year 6, where children are taught to explain their choice of methods and develop their mathematical reasoning skills.

Use oracy as well as developing mathematical vocabulary and ensure this is built into each unit and recapped through clearly structured stem sentences. We want our children to recognise the importance of Maths in all aspects of everyday life, becoming fluent in the fundamentals and applying this in their understanding and problem solving.

We want to ensure our teachers have access to the CPD they need to deliver the best lessons for our pupils.

Intent

In EYFS, we want our pupils to have a good understanding of pattern, linking to the introduction of number. This will then support them to develop their knowledge of the composition of number, counting and cardinality.









At Bevendean Primary School and Nursery, we plan lessons that are engaging, accessible for everyone and builds on prior learning. We plan directly from the National Curriculum, using small steps to scaffold the learning and make it progressive. Class teachers use a range of resources, including the NCETM progression maps, TT Rock Stars, NRich and elements of White Rose, to ensure a mastery curriculum is in place throughout the school and ensure what we offer is rich and varied. Lessons follow the mastery approach, ensuring all elements of mastery are seen throughout the learning cycle, for example cohesion, mathematical thinking, reasoning and problem solving and fluency.

Class teachers use the termly overview of the National Curriculum, which has been broken down into small steps by the Maths lead. Lessons have a structure that is followed every day: times table practice, key skills (which is recapping prior learning to develop fluency) and the main activity linked to that lesson's Can I. The Maths lead monitors this regularly, offering support if needed and ideas to support their planning.

Learning walks are used to ensure the implementation of these structures, working together with the class teacher to support them to follow 'what maths looks like at Bevendean.' We have implemented a strong marking policy that works to develop the mathematical learner giving on the spot feedback as well as providing challenge and support where needed.

Our resources are audited and replaced annually, with CPD being delivered to staff regularly on how, why and when to use different mathematical equipment and how it can support children's learning. We have also used literature within our maths lessons choosing books from a wide range of authors to support real life problems solving as well as provide a stimulus to learning that is fun and engaging.

We have worked closely as a unit to establish working parties that have fed back information on how new strategies are working and have gained valuable insights which have been fed back to staff, sharing ideas and new ways of engaging learners.

Through the monitoring of planning teachers are now following and curriculum map tailored for each year group based on the National Curriculum objects but support through continued teacher CPD. By following this overview teachers have the opportunity to follow a spiral based curriculum rich in problems solving and reasoning lessons whilst support the ease of cognitive load by building upon the skills from the year before.

Developing Mastery

We are embedding a mastery approach throughout school from EYFS, so that the teaching and learning is consistent and will support all pupils with their understanding. Our lessons are built using fluency, cohesion, fluency and problem-solving elements in order to challenge and support learning.

<u>Modelling</u>

We have supported class teachers' development of modelling through training of the CPA approach. All units of mathematics are built through the teaching of this structure in order to really embed new concepts within children's learning.

We have ensured that this is implemented across all key stages, building upon knowledge in a cyclical cycle where 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 counters (concrete equipment). When children have grasped a concept using concrete equipment, images and diagrams are used (pictorial)

Developing Vocabulary

Pupils use acquired vocabulary in maths lessons. They have the skills to use methods independently and show resilience when tackling problems expressing this throughout a variety of different ways. Children talk through problems in pairs, trios and as larger groups. They have the chance to orally practice stem sentences as part of the lesson. The stem sentences are used to support learning and are built into the worksheets where appropriate.

In EYFS and KS1 the bespoke curriculum supports children's vocabulary by following the 'Maths Mastery program' which builds upon their mathematical language in a progressive spiral. Providing strong opportunities to orally rehearse whilst supporting their









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.

Through regular monitoring we ensure that children have access to flips that are interactive, visual and have a wide variety of different modelling slides within them.

flexibility and fluidity to move between different contexts and representations of maths. We have started to build in books within our maths lessons to explore new vocabulary in an interactive and immersive way. We ensure the books are high quality and rich with immersive mathematical ideas.

Thoughtful Questioning

We have supported staff to deliver thoughtful and purposeful questioning throughout their lessons. We ensure that at the start of each lesson children have the opportunity to be exposed to a variety of different questioning linked to problem solving and reasoning. Teacher and support staff are aware of how to uplevel their questioning to assess children's knowledge and understanding. We have worked with all staff to work on targeted questioning ensure that questions are targeted and aim at pupils based on their next steps of learning and development. Precise/procedural questioning

Identifying pattern and connections

We have ensured that children that start at Bevendean Primary school in Nursery and reception are taught how to seek out patterns and make connections with number. We are following the mastering number approach immersing children in the numberness of number and support this with a CPA approach for children to create visual patterns that will support their later learning. We support their learning and development of pattern with sessions of spatial awareness and pattern spotting and subitising. This is continued into KS1 and beyond with teaching building upon previous learning and supporting pattern spotting and connections by exposing the mathematics through small succinct steps.

<u>Development of fluency, reasoning and problem solving</u>

We have ensured that we implement fluency lesson throughout our maths cycles. We know the importance of developing number sense and being able to choose the appropriate method for the task and apply these skills to a wide range of context. In every maths lesson across the school the lesson starts with times table practice with support children times table recall aiming to reduce workload and improve working memory to enable children to access a wider context of problems. We continue our lessons with a key skill section which allows children to rehearse previously taught skills, which could be anything from number bonds, column method addition or decimal conversions. Finally, we move onto the main maths teaching which we have ensure has problem solving and reason woven

throughout it, working hard to ensure our class teachers are armed with a wide variety of tools to allow them to use all aspect of the mastery









curriculum.

Assessment

Through our teaching we continuously monitor pupils' progress against expected attainment for their age, making formative assessment notes where appropriate and using these to inform our teaching. Children receive instant feedback on how they have done and the opportunity to address any misconceptions is planned into lessons.

Summative assessments are completed at the end of each half term; their results form discussions in termly Pupil Progress Meetings and update our summative school tracker. The main purpose of all assessment is to always ensure that we are providing excellent provision for every child.

Interventions

When planning our weekly lesson class teachers are aware of the misconceptions that may arise in their lessons and plan pre-teaches accordingly. These mini lessons support children to then access the lesson more independently and allow them to become confident of new vocabulary or skills more quickly.

Throughout the lessons class teachers are assessing children's progress to determine whether they need an intervention after the lesson to support their understanding further. This is assessed on a need by need basis and interventions can be to challenge greater depth learning or to close a gap in a misconception.

Cross Curricular Links

Maths is taught across the curriculum ensuring that skills taught in these lessons are applied in other subjects.









How do we measure this?

The impact is that our children will become fluent, competent and efficient mathematicians. They will be able to recall facts and procedures, including the recollection of times tables. They will be able to apply these facts to a variety of problem solving and reasoning activities choosing the correct method to support their working out.

This impact is moderated through daily assessment sheets that help to map out a child's learning journey highlighting where they are recognising the relationships and making connections within the mathematics. This is then used to termly assess during peer moderation meetings. Throughout these moderation meetings teachers are monitoring the impact on ow interventions and pre-teachers support their judgement and how greater depth challenges are enabling deeper connections to be made.

Learning walks are used regularly to see settled and supported activities as well as book looks that have highlighted that children are scaffolded through a cohesive small step approach to achieve the daily objective. This has highlighted that are standards are improving against the planned outcomes with less children being placed on a bespoke curriculum especially in KS1 with the learning supporting their development and following their need throughout the year.

Delivering the above curriculum will result in our children;

- Know, remember and understand the knowledge and skills they have been taught through the maths curriculum lessons.
- Retain prior-learning and make connections between this and their current learning.
- Show progress within our maths assessments throughout their school career.
- Apply a variety of skills to a variety of problems solving and reasoning questions.
- Develop and use a richer vocabulary which will enable them to articulate their understanding of taught concepts
- Show confidence and a love of learning for all things Maths.

Pupil Voice

Pupil voice has enabled our pupils to discuss their learning allowing them to highlight 'I love learning new things,' Year 1 child

'I like it when I solve a problem and it is correct.' Year 5 child

'I now know all of my times tables!' Year 4 child

Our pupil voice has highlight that our children love maths, and they can express their understanding and enjoyment of it regardless of the year group they are in. We have listened to their needs and have applied more resources and child centred learning to support this.

Evidence in Knowledge and Skills

Ou children will be able to demonstrate their understanding throughout the lesson cycle, showing their times table knowledge first before exhibiting their autonomy of a previously taught skill before demonstrating their understanding and cohesion of a new skill in their main lesson cycle.

They can show how and why they have chosen a method to support their problem solving by verbally reasoning and talking through the question or by demonstrating it with resources using the CPA approach.

Our pupils can vocalise their understanding through taught stem sentences using them as a clear backdrop to their learning, building upon

them with new vocabulary to really build a strong mathematician.







