

Inglewood Community Nursery and Infant School - Curriculum Statement



Curriculum statement for the teaching and learning of Maths Mastery 2021/2022

At Inglewood Community Nursery and Infant School, we are committed to providing our children with a curriculum that has a clear intention and that impacts positively upon their needs.

It is our vision that...

mathematics at Inglewood is practical and enjoyable, giving our children opportunities to explore and engage with challenging mathematics in meaningful contexts.

National Curriculum Intent The national curriculum for mathematics intends 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. Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.

The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. Our curriculum ensures that children apply mastery skills. We follow the White Rose maths scheme, with agreed key instant recall facts used to extend fluency, reasoning and problem solving. They should also apply their mathematical knowledge to cross curricular learning.

The Statutory Framework for the Early Years Foundation Stage intends that educational programmes must involve activities and experiences for children, as set out :

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

INTENT - IMPLEMENTATION - IMPACT

INTENT	When teaching mathematics at Inglewood Community Nursery and Infant School, we intend to provide a curriculum which caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to be successful. We aim to provide a strong foundation for our young learners to build upon in order for them to go on to gain future opportunities for a successful working life. We intend to incorporate appropriate levels of challenge through varied and high-quality activities with a focus on fluency, reasoning and problem solving. Using the mastery approach pupils are required to explore maths in depth, using mathematical vocabulary to reason and explain their workings. A wide range of mathematical resources are used and pupils are taught to show their workings in a concrete, pictorial and abstract form wherever suitable. They are taught to explain their choice of methods and develop their mathematical reasoning skills. We encourage resilience, adaptability and acceptance that we can learn through trial and error. Our curriculum allows children to better make sense of the world around them relating the pattern between mathematics and everyday life.			
	VOCABULARY	KNOWLEDGE / SKILLS	PROGRESSION	OPORTUNITY
	We intend to create a vocabulary rich environment, where talk for maths is a key learning tool for all pupils. We intend to expose all pupils to year group specific mathematical language. Pupils will be encouraged to use cognitive thinking and mathematical vocabulary to explain their methods.	It is our intention to create a curriculum which blends knowledge with skills. A curriculum which provides solid foundational skills which children can build up on and which will foster confidence in maths.	We intend to use assessment and gap analysis to inform next steps and to plan for progression. We intend to use carefully sequenced lessons and steps to ensure children secure mathematical understanding. We will use planned opportunities to communicate effectively with parents in regards to progress and to support children beyond the classroom.	When beginning their primary school journey in the EYFS, many children arrive to school with different and sometimes more limited experiences than others. Therefore, our aim is to give children the knowledge and skills to prepare them for what comes next in their lives. This includes the relevant vocabulary needed throughout their education and the opportunity to link maths to real-world problem solving.

<p><u>Mastery - White Rose Maths</u> Every class from Reception to Y2 follows the White Rose scheme of learning, which is based on the National Curriculum, and which is linked to the DfE Ready to progress criteria. It is also compatible with the new 2021 EYFS framework. Lessons may be personalised to address the individual needs and requirements for a class but coverage is maintained. Learning is carefully sequenced and blends elements of mastery and spiral learning. This allows for children to practise retrieval skills regularly.</p> <p><u>Fluency – Key Instant Recall Facts</u> We use Big Maths CLIC and ACLIC to support the development of fluency. We also use our own additional objectives to support the teaching of subitising and composition of number.</p>	<p><u>Concrete Pictorial Abstract (CPA)</u> 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. When children have grasped a concept using concrete equipment, 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.</p>	<p><u>Modelling</u> Teachers teach the skills needed to succeed in mathematics providing examples of good practice and having high expectations.</p> <p>Peer support is used (as appropriate) with benefit to both the coaches and those being coached.</p>	<p><u>Pattern and Connection Identification</u> All children will have opportunities to identify patterns or connections in their maths; they can use this to predict and reason and to also develop their own patterns or links in maths and other subjects.</p>
<p><u>Assessment</u> Through our teaching we continuously monitor pupils' progress against expected attainment for their age, and against individual starting points. We make formative assessment notes and use these to inform our teaching. Summative assessments are completed towards the end of each term and these are used to identify areas for development for groups and individuals. The main purpose of all assessment is to always ensure that we are providing excellent provision for every child.</p>	<p><u>Continuing Professional Development</u> (CPD) We continuously strive to better ourselves and frequently share ideas and things that have been particularly effective. We are part of the North West Maths Hub Mastery Readiness programme. We keep abreast of developments, reports and new ideas in maths. We refer to published guidance from notable sources: DfE Ready to Progress criteria. NCETM prioritisation document. Ofsted mathematics research document (May 2020).</p>	<p><u>Communication</u> Evidence Me is used as a powerful communication tool in the EYFS. Staff are quickly and easily able to communicate with parents about children's learning.</p> <p>Observation sheets are completed regularly, targets added and shared with parents.</p> <p>E-mail is also used as a communication tool for setting homework including maths. We also use WRM video lessons for home learning which support parents/carers in understanding tasks.</p> <p>Parent's receive regular reports regarding their child's progress. (This is via written reports and face to face / telephone meetings.)</p>	<p><u>Online</u> In order to support pupils to develop rapid recall of key number facts we use Numbots and Times Tables Rock Stars (as appropriate for age groups). We also use Purple Mash to set maths tasks.</p> <p>Evidence Me can also be used to set and discuss mathematical tasks.</p>
<p>EYFS Number fluency is continually developed within early years: our Mathematical curriculum covers number, recognising numerical patterns and shape, space and measures. Children in Nursery and Reception participate in regular maths sessions and are given time to explore mathematical concepts, test ideas, develop their understanding and mathematical vocabulary and to practise taught skills through play. Maths can be found in all areas of our provision and children experience it in a purposeful and meaningful context within their play and daily routines. During independent learning time children can explore number, shape, space and measures through continuous provision. Children are encouraged to use their mathematical understanding and skills to solve real-life problems and practitioners are trained to identify and extend opportunities to foster this. Maths activities in the Early Years can be directed or can follow children's interests.</p> <p>Throughout the EYFS 'Birth to 5 Matters' (2021) is used as a reference point to support planning and creating appropriate tasks for directed teaching and independent learning opportunities.</p>			

IMPACT	PUPIL VOICE	KNOWLEDGE	SKILLS	Cultural Capital and SMSC
	<p>Children use an increasing range of mathematical vocabulary with accuracy and can explain their thinking.</p> <p>Through discussion and feedback, children talk enthusiastically about their maths lessons and speak about how they enjoy learning in maths.</p> <p>Children show confidence and believe they can learn about a new maths area and apply the knowledge and skills they already have.</p>	<p>Children acquire mathematical knowledge.</p> <p>Children develop strong foundational skills and security with core aspects of maths.</p> <p>Pupils have automaticity in maths, underpinned by good understanding and number sense.</p> <p>Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.</p> <p>Children demonstrate quick recall of number facts and can apply this knowledge when solving related problems.</p>	<p>Children develop independence and show resilience when tackling problems</p> <p>They have the flexibility and fluidity to move between different contexts and representations of maths</p> <p>Children develop the ability to recognise relationships and make connections in maths lessons.</p> <p>Children use and apply their mathematical thinking inside and outside of school. They use their mathematical skills in cross curricular areas.</p> <p>They develop broad and deep understanding of mathematical concepts.</p>	<p>Young pupils show emerging understanding of the need for maths beyond school. They begin to understand that maths is important for their futures.</p> <p>Children talk about maths in a positive way. Enjoyment of maths is celebrated and maths is spoken about positively. Children work both collaboratively and independently. Success in maths is celebrated and shared. Maths is linked to other curriculum areas and opportunities to make links to cultural influences are seized. Concepts of fairness, sharing and data collection are used and linked to real life situations. Children share, and look after, maths resources in the classroom. Children extend their learning through role play and other aspects of continuous provision. Adults support children to extend and deepen learning through high quality interactions.</p>
<p>The expectation is that the majority of pupils will move through programmes of study at broadly the same pace. However, decisions about when to progress will always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly will be challenged to broaden and deepen their learning. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.</p> <p>All children are expected to succeed and make progress from their starting points.</p>				