

All-through Mathematics Strategy

Curriculum Purpose & Rationale	<ul style="list-style-type: none">At Ark Kings, our Maths curriculum aims to give children the fundamental mathematical understanding that prepares them for the next phase of their education. The curriculum is delivered with a focus on learning a skill, then applying this skill in a variety of ways, before using the skill in a reasoning or problem-solving situation. This is to ensure our pupils experience how Maths is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. We aim for our pupils to understand that Maths is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment.
Nursery	<ul style="list-style-type: none">Children are introduced to the basic concepts of number, shape, space and measure.Concepts are introduced using small group work and indirect teaching, using play to enhance learning.During Summer 2, children who will be moving to Reception in the following September will begin to be taught through the Mathematics Mastery Child - Initiated Model. This is to ensure they are familiar with the Mathematics curriculum approach in Reception.
Reception	<ul style="list-style-type: none">Children follow the Mathematics Mastery (MM) scheme of work.Children have 4 lessons per week.Children follow a 6 part lesson structure where new learning and the Talk Task are explicitly modelled for pupils.The continuous provision is set to enable pupils to explore the key learning of the unit through child-initiated learning.
Year 1	<ul style="list-style-type: none">Pupils follow the MM scheme of work with 5 lessons per week.The MM curriculum is designed to include all of the National Curriculum objectives for Year 1, plus a small number from the year above – from number – as these will help pupils make connections with their learning.Each school year begins with a focus on the concepts and skills that have the most connections, and this concept is then applied and connected throughout the school year to consolidate learning. This gives pupils the opportunity to 'master maths'. By using previous learning throughout the school year, they are able to develop mathematical fluency and conceptual understanding.
Year 2	<ul style="list-style-type: none">Pupils follow the MM scheme of work with 5 lessons per week.The MM curriculum is designed to include all of the National Curriculum objectives for Year 2, plus a small number from the year above – from number – as these will help pupils make connections with their learning.The dimensions of depth- conceptual understanding, language and communication and mathematical thinking - underpin all aspects of the curriculum; problem solving is at the heart and is embedded in all units taught.Pupils have a daily focus of arithmetic.Times tables are practised in school and at home, focusing on the x2, x5 and x10 multiplication and division facts.
Year 3	<ul style="list-style-type: none">Pupils follow the MM scheme of work with 5 lessons per week.The MM curriculum is designed to include all of the National Curriculum objectives for Year 3, plus a small number from the year above – from number – as these will help pupils make connections with their learning.The dimensions of depth- conceptual understanding, language and communication and mathematical thinking - underpin all aspects of the curriculum; problem solving is at the heart and is embedded in all units taught.Times tables are practised in school and at home using Times Tables Rockstars. This programme fosters speed in recall of multiplication and division facts in our pupils.
Year 4	<ul style="list-style-type: none">Pupils follow the White Rose scheme of work in line with the National Curriculum objectives for Year 4 with 5 lessons per week for all pupils.All lessons begin with an arithmetic practice opportunity. This is to ensure regular retrieval of key skills children need to access all aspects of the Maths curriculum.A mathematical skill is modelled, pupils are given time to independently practise this skill. (I,We,You).Within the same lesson the skill is modelled again with application/reasoning and pupils are given time to independently apply the new skill. (I,We,You). This is to ensure pupils have regular opportunities to apply their learning in context and in problems, rather than just practising this skill at the end of a unit.Times tables are practised in school and at home using Times Tables Rockstars. This programme fosters speed in recall of multiplication and division facts in our pupils.
Year 5	<ul style="list-style-type: none">Pupils follow the White Rose scheme of work in line with the National Curriculum objectives for Year 5 with 5 lessons per week for all pupils.All lessons begin with an arithmetic practice opportunity. This is to ensure regular retrieval of key skills children need to access all aspects of the Maths curriculum.A mathematical skill is modelled, pupils are given time to independently practise this skill. (I,We,You).Within the same lesson the skill is modelled again with application/reasoning and pupils are given time to independently apply the new skill. (I,We,You). This is to ensure pupils have regular opportunities to apply their learning in context and in problems, rather than just practising this skill at the end of a unit.Times tables are practised in school and at home using Times Tables Rockstars. This programme fosters speed in recall of multiplication and division facts in our pupils.
Year 6	<ul style="list-style-type: none">Pupils follow the White Rose scheme of work in line with the National Curriculum objectives for Year 6 with 5 lessons per week for all students.All lessons begin with an arithmetic practice opportunity. This is to ensure regular retrieval of key skills children need to access all aspects of the Maths curriculum.A mathematical skill is modelled, pupils are given time to independently practise this skill. (I,We,You).Within the same lesson the skill is modelled again with application/reasoning and pupils are given time to independently apply the new skill. (I,We,You). This is to ensure pupils have regular opportunities to apply their learning in context and in problems, rather than just practising this skill at the end of a unit.Times tables are practised in school and at home using Times Tables Rockstars. This programme fosters speed in recall of multiplication and division facts in our pupils.
Year 7	<ul style="list-style-type: none">Students follow Maths Mastery scheme of work.4 lessons per week for sets 1 to 4, sets 5 and 6 receive an additional 1 lesson per week to receive intervention in fluency skills.Scheme of work is focussed around algebra being applied to other areas of mathematics, predominantly number and geometry.
Year 8	<ul style="list-style-type: none">Students follow Pearson Delta scheme of work in line with the Edexcel GCSE they will sit.5 lessons per week for all students, lower sets receive numeracy interventions at the beginning of each lesson.Scheme of work focusses on securing number skills, building on algebra and geometry skills.
Year 9	<ul style="list-style-type: none">Students follow Pearson delta scheme of work in line with the Edexcel GCSE they will sit.5 lessons per week for all students, lower sets receiving numeracy interventions at the beginning of each lesson.Scheme of work moves away from number, predominantly focussing on more sophisticated algebra, geometry and proportion skills.
Year 10	<ul style="list-style-type: none">Students split to follow the pearson Edexcel foundation or higher scheme of work.5 lessons per week for all students.Scheme of work spirals back to build on fundamental skills in all strands of mathematics in readiness for Year 11.
Year 11	<ul style="list-style-type: none">Students continue to follow either pearson higher or foundation scheme of work.5 lessons per week, with additional interventions completed ad hoc for those students we are targeting for grade 4 in particular.Scheme of work builds on fundamental skills from year 10 and enters the more advanced skills required for access to their GCSE.