

Maths

STRATEGY



Kings Meadow School
Believe and Achieve

VISION

Our Math's Curriculum utilises an online programme called White Rose Education. The White Rose schemes of learning have been carefully developed to ensure they link to the national curriculum's key stages. This supports the mathematical skills needed to thrive in real life situations as well as recognising the importance of being able to inspire and engage our learners to support their SEMH needs.

Curriculum content is planned so that all children can make progress from their individual starting points. This is key in the three pathways at Kingsmeadow: Connect, Engage and Develop. The Math's curriculum supports the SEMH needs of children as well as their academic development. Topics are arranged into terms and year groups to ensure sequential learning takes place. We use a bank of practical resources, and each class may utilise outdoor learning, continuous provision, school trips, cooking to further consolidate mathematical knowledge in fun and engaging ways. This aims to build confidence for the most reluctant students. Routine and repetition are vital to their progress.

The expectation is that the pupils will move through the programmes of study at different paces. However, decisions about when to progress should 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 and those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

At Kings Meadow, we understand that mathematics is essential to everyday life, critical to science, and technology, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

The focus of our curriculum is to prepare children for life and to educate and equip them with the knowledge and tools they need to be successful in adult life and to contribute positively to society. Our progression through learning is carefully mapped out in detail across all classes and stages of development.

It is common for children to start Kings Meadow School with a fractured understanding and exposure to maths. This not only results in a poor grasp of number, problem solving, mathematical language recall and applying knowledge but damaged self-esteem and low resilience and heavily influences avoidance learning behaviours. The importance of maths is emphasized through every class and pathway. It allows children to achieve and learn significant life skills at developmentally appropriate stages as opposed to age related targets. There is also a focus on flexibility and personalisation across the whole day as we respond to the individual needs of each child, developing and empowering children with mathematical literacy.

CURRICULUM OVERVIEW

White Rose takes the main learning objectives from the national curriculum and breaks them down into teaching blocks across each term. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils can make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving problems.

The expectation is that the pupils will move through the programmes of study at different paces and this may be very small steps. However, decisions about when to progress should 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 and those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

WRM – Year 1/2 – Scheme of Learning 2.0s												
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value Y1 – Numbers to 20 Y2 – Numbers to 100			Number: Addition and Subtraction Year 1- Numbers within 20 (including recognising money) Year 2- Numbers within 100 (including money)					Number: Year 1: Place Value to 50 and Multiplication Year 2: Multiplication			
Spring	Number: Year 1: Division & consolidation Year 2: Division		Year 1: Place Value to 100 Year 2: Statistics		Measurement: Length and Height	Geometry: Year 1: Shape and Consolidation Year 2: Properties of Shape			Number: Year 1: Fractions and Consolidation Year 2: Fractions		Consolidation	
Summer	Geometry: Position and Direction	Measurement: Time		Year 1: Place Value recap Year 2: Problem solving		Measurement: Year 1: Weight and Volume Year 2: Mass, Capacity and Temperature			Year 1: Four Operations recap Year 2: Consolidation and Investigations			Consolidation

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Four Operations					Number: Fractions				
Spring	Y5: Number: Fractions	Number: Decimals and Percentages				Y5: Number: Decimals		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Statistics	
	Y6: Number: Ratio					Y6: Number: Algebra						
Summer	Geometry: Properties of Shape		Geometry: Position and Direction	Y5: Four Operations consolidation			Y5: FDP consolidation		Y5: Measure consolidation		Consolidation	
				Y6: SATS		Investigations						


We use the WRM Ready to Progress which lists the key steps in the White Rose Maths schemes of learning that support each of the 'Ready to Progress' criteria.

Ready to Progress

Years 1 to 6

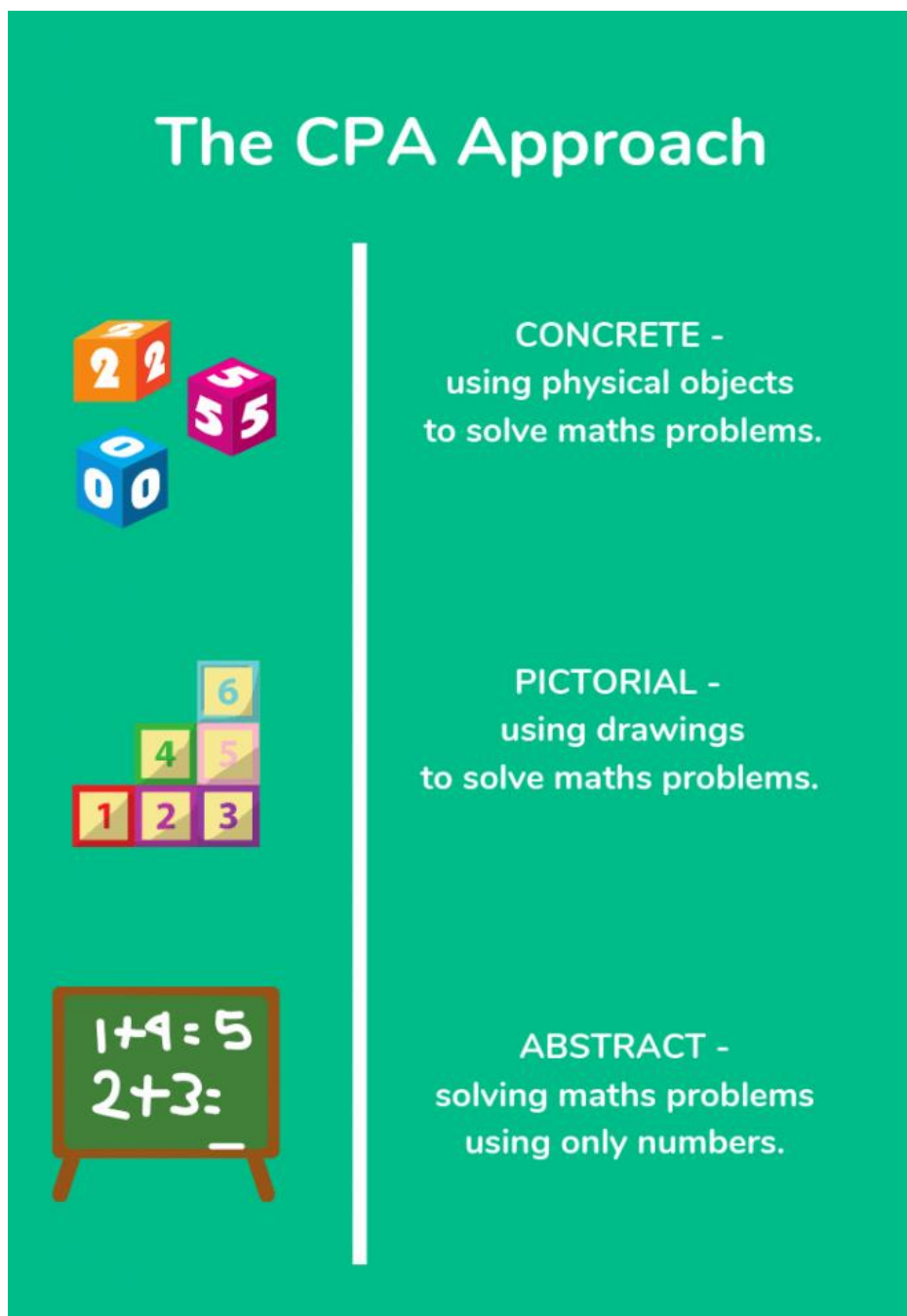
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2021-22



White rose uses a CPA approach - concrete, pictorial, abstract. This is a system of learning that uses physical and visual aids to build a child's understanding of abstract topics. Pupils are introduced to a new mathematical concept through the use of concrete resources (e.g. fruit, blocks etc). When they are comfortable solving problems with physical aids, they are given problems with pictures – usually pictorial representations of the concrete objects they

were using. Then they are asked to solve problems where they only have the abstract i.e. numbers or other symbols. Building these steps across a lesson can help pupils better understand the relationship between numbers and the real world and, therefore, helps secure their understanding of the mathematical concept they are learning.



PATHWAY CURRICULUM

The curriculum across all key stages and throughout all classes has been developed in order to allow for the flexibility and personalization required to respond to the individual needs of each child. All curricular areas aim to support children's SEMH needs by providing learning opportunities.

Connect	Engage	Develop
<p>Highly dysregulated, seeks disruption to feel safe, inconsistent attention span, poor peer to peer and adult relationships, low self-esteem.</p>	<p>Poor resilience to adversity, particularly with peer to peer and adult relationships, or academic challenge reluctance to persevere with work, even with support.</p>	<p>Poor resilience to adversity, particularly with peer to peer and adult relationships, or academic challenge reluctance to persevere with work.</p>
<p>Bespoke timetable. Multi-sensory approaches are in place. Identify hooks with Maths. Maths within other subjects such as cooking. Opportunities for outside learning. Use of fun and engaging resources. Kinesthetic and visual supports in place. CPA approach used to support engagement. Complete maths work with 1:1 support. Very personalised planned next steps. Focus on Maths SEMH skills- this may include engaging with the adult, working in a different classroom area, breakout area sharing resources with others and increasing tolerance to the completion of work. Highly skilled/trained staff that are familiar with the needs of pupils with mathematical needs.</p>	<p>Structured whole class timetable. Multi-sensory approaches are in place. Identify hooks with Maths. Continuous play-based learning opportunities to encourage engagement. Use of fun and engaging resources. Kinesthetic and visual supports in place. CPA approach used to support engagement and some knowledge retention Complete maths work with 1:1 support or small group work. Personalised next steps. Students may start to work at arm's length or independently for short periods of time. Highly skilled/trained staff that are familiar with the needs of pupils with mathematical needs.</p>	<p>Structured whole class timetable. Multi-sensory approaches are in place. Identify hooks with Maths. Use of fun and engaging resources. Kinesthetic and visual supports in place. CPA approach used to support engagement and key knowledge retention. Pupils can engage in the academic curriculum and emphasis is on knowledge retention and practical skill development so they access further education. Complete maths work with 1:1 support, small groups or whole class. Personalised next steps Students may start to work independently for short to longer periods of time. Highly skilled/trained staff that are familiar with the needs of pupils with mathematical needs.</p>

ASSESSMENT FRAMEWORK

All new students to Kingsmeadow will complete a White Rose assessment to understand where to initially baseline them. Regular termly monitoring then takes place using the small step WRM pupil trackers. This feeds into termly student progress meetings three times a year and potential interventions can be identified. Analysing this

information informs our curriculum and the needs of the students at our school, focusing on their small steps of progress.

Small step WRM pupil trackers are used continuously to track pupil learning. This tracker supports teacher judgements at the end of each unit/term. Through the discretion of the teachers' pupils may also do an end of unit assessment within the year group they are working on. Teachers can then use the Ready to Progress information and potentially an end-of-term assessment if required to ensure that support and challenge is being addressed.

Maths moderation also takes place termly (three times a year) and this is to ensure consistency across the three learning pathways and allows us to make judgements about the year stage they are working on.

We also use key information about children's needs identified in their EHCP to develop personalised curriculum targets. These may be maths based and are monitored in class and added onto a whole school document which will soon move to a new programme called Evidence for Learning. These unify targets for development across all learning, including maths, to collectively support children to meet their EHCP targets.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM
Year 2 - Autumn									Name																													
Working below =																																						
Working towards =																																						
Working at =																																						
Working above =																																						
Block 1: Number - Place Value																																						
Count objects to 100 and read and write numbers in numerals and words																																						
Represent numbers to 100																																						
Tens and ones with a part whole model																																						
Tens and ones using addition																																						
Use a place value chart																																						
Compare objects																																						
Compare numbers																																						
Order objects and numbers																																						
Count in 2s, 5s and 10s																																						
Count in 3s																																						
Block 2: Number - Addition and Subtraction																																						
Fact families – Addition and subtraction bonds to 20																																						
Check calculations																																						
Compare number sentences																																						
Related facts																																						
Bonds to 100 (tens)																																						
Add and subtract 1s																																						
10 more and 10 less																																						
Add and subtract 10s																																						
Add a 2-digit and 1-digit number – crossing ten																																						
Subtract a 1-digit number from a 2-digit number – crossing ten																																						
Add two 2-digit numbers – not crossing ten – add ones and add tens																																						
Add two 2-digit numbers – crossing ten – add ones and add tens																																						
Subtract a 2-digit number from a 2-digit number – not crossing ten																																						
Subtract a 2-digit number from a 2-digit number - crossing ten - subtract ones																																						
Bonds to 100 (tens and ones)																																						
Add three 1-digit numbers																																						
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Block 3: Measurement - Money																																						
Count money – pence																																						
Count money – pounds (notes and coins)																																						
Count money – notes and coins																																						

We are aware that the students at Kingsmeadow are often working below their chronological age. Therefore, small step progress is an important factor in teaching and learning across the school. In year 6, it is important to ensure that students are ready for their next step towards their secondary education. We need to equip students with the knowledge and skills they need for their transition.