



Cedars Park Primary School

Maths Long Term Plan

Intent

At Cedars Park, we believe in the power of maths to change our children's lives. Being a confident mathematician enables children to solve real-life problems. We are committed to equipping our pupils with the necessary knowledge and understanding to be good time-keepers, savvy shoppers and discerning citizens who question the figures put before them. As teachers who are passionate about maths, we want our children to know that the maths they learn inside and outside of the classroom has the potential to unlock doors in their futures as scientists, engineers and designers. We also believe that, like a love of literature, a love of maths – its patterns and its power – is a fundamental right for all children. We ensure that our curriculum is accessible for all to enable all learners to make progress from their own starting points, including those with Special Educational Needs (SEN). This is achieved by our planning being differentiated to meet the needs and abilities of all. Where there are barriers, we pride ourselves on embracing different approaches and seizing new opportunities to ensure high-quality learning.

Implementation

At Cedars Park, we follow a mastery approach to teaching Maths, meaning that we believe that all children can be successful mathematicians. Like all other subjects, maths is taught in mixed attainment groups so that all children contribute to and benefit from class discussions and receive both the support and challenge that they need. The only exception to this is in Year 6, where we may take the decision to set the children in order to better meet their individual needs based on their starting points. However, this is rigorously monitored, fluid and any potential 'glass ceilings' are challenged by all.

The school's teaching and curriculum is tailored to meet individual pupils' needs, including those with SEN. If appropriate, reasonable adjustments to the curriculum will be implemented in order for our pupils to achieve and make progress from their own individual starting points. Children may benefit from the following to support their needs:

- A variety of teaching and learning styles
- Differentiated learning materials and resources
- Access to ICT
- Additional in class support
- Additional out of class support
- Support through one to one interaction, group activities or whole class work
- Assessment procedures to ensure children are monitored and given the appropriate support.
- Advice & Support from outside agencies



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Teachers use the White Rose maths programme to build progression from year to year. One way that children are supported to master the maths curriculum is through exposure to concrete, pictorial and abstract representations of maths. All children use manipulatives like diennes, Numicon and place value counters to gain a deep understanding of the value of numbers, whilst learning how to represent them pictorially and calculate with them in more abstract ways.

We also use a range of high-quality resources (such as Classroom Secrets, I See Maths, Kangaroo Maths, Primary Maths Solutions, Deepening Understanding and more) to plan engaging and interactive lessons rich in pupil talk and collaborative problem solving. Children see maths in real contexts on a daily basis and have the chance to work with their partner in each lesson, before consolidating their understanding with independent practice.

The National Curriculum sets out three areas of maths for children to master:

1. Fluency
2. Reasoning
3. Problem solving

Fluency

All lessons involve a focus on being fluent mathematicians. Having key learning like bonds to 10 and times tables at their fingertips helps our children to work efficiently. Where less thinking time has to be given to calculating these basics, pupils are more able to reason and solve problems. Fluency practice is varied and engaging. Children may 'beat the timer' to recall key facts or use mini-white boards to complete a quick-fire round. In addition, every lesson starts with a short recap task to revisit past learning and skills, central to developing children's fluency skills. This is called 'Flashback 4' in KS1 and 'Fluent in Five' in KS2.

Reasoning

Alongside learning key number facts, children learn to reason about their maths. This involves partner talk and having to justify answers using mathematical vocabulary. Being able to say why an answer or method is correct or incorrect shows mastery of an area of maths. It also enables children to better notice and self-correct when they are not on track. Reasoning also involves pattern spotting and looking for rules and connections. Children are encouraged to look for patterns and links and wonder why. Questions and conjectures are celebrated and explored together to work towards a shared understanding.

Problem Solving

Problem solving is an element in all units of maths. Children are given opportunities to apply calculation strategies to real-life problems. Discussion is a key element of problem solving; tackling a problem in different ways is celebrated. Children learn to think creatively and know that there is no 'one correct way'



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to represent or solve a problem. As mathematicians, they must draw on all of their knowledge and skills to decide how best to get started and what to do if their first try does not work. Through problem solving, children therefore develop flexible thinking and resilience: the problems are not supposed to feel easy to solve but they certainly feel satisfying when a solution is finally reached.

Impact

Assessment is woven into maths lessons so that teachers have a clear idea of what has been mastered and what each child's next steps are. Planning is responsive – teachers plan to meet children's gaps on a daily, weekly and termly basis. Children complete a daily check at the start of lessons to assess their fluency in key skills (for example to be able to multiply and divide by 10). This will take no longer than 10 minutes and children are often able to self-assess to get instant feedback. Plenary tasks or challenges are used to revisit learning from previous weeks or terms to ensure that it has 'stuck'. Many assessments are low-stakes and take place as a normal part of the maths lesson routine. Children have access to any equipment that may help them to be successful and are encouraged to self-select what they need. In this way, pupils are taught to be reflective and are involved in seeing their progress and their next steps.

In addition, we also follow the PiXL Assessment calendar (or use of PUMA in Early Years and Year 1), which enables summative assessments to be undertaken, again to inform future planning by identifying gaps in pupils skills and knowledge, as well as to benchmark standards at Cedars Park against the wider PiXL cohort of schools.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Early Years	<ul style="list-style-type: none"> ● Matching numbers to quantity ● Number names ● Ordering ● All about 1,2,3 ● All about 4 & 5 ● Sorting and Matching 	<ul style="list-style-type: none"> ● One more ● One less ● Comparing identical objects ● Comparing non-identical objects ● My day 	<ul style="list-style-type: none"> ● Introducing zero ● Number bonds to 5 ● Counting 6,7,8 ● Counting 9 & 10 ● Comparing groups to 10 ● Combining two groups to find the whole 	<ul style="list-style-type: none"> ● Number bonds to 10 ● 2D shape ● 3D shape ● Spatial Awareness 	<ul style="list-style-type: none"> ● Adding More ● Taking away ● Simple repeating patterns ● Complex patterns ● Counting to 20 ● Doubling 	<ul style="list-style-type: none"> ● Halving and sharing ● Odds and evens ● Length, height and distance ● Weight ● Capacity
Year 1	Number <ul style="list-style-type: none"> ● Place Value (10) 	Number <ul style="list-style-type: none"> ● Addition and 	Number <ul style="list-style-type: none"> ● Addition and 	Number <ul style="list-style-type: none"> ● Place Value (50) 	Number <ul style="list-style-type: none"> ● Multiplication 	Number <ul style="list-style-type: none"> ● Place Value



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	<ul style="list-style-type: none"> Addition and Subtraction (10) 	Subtraction (10) <ul style="list-style-type: none"> Place Value (20) Geometry <ul style="list-style-type: none"> Shape 	Subtraction (20) <ul style="list-style-type: none"> Place Value (50) 	Measurement <ul style="list-style-type: none"> Length and Height Weight and Volume 	and division <ul style="list-style-type: none"> Fractions Geometry <ul style="list-style-type: none"> Position and Direction 	(100) Measurement <ul style="list-style-type: none"> Money Time
Year 2	Number <ul style="list-style-type: none"> Place Value Addition and Subtraction 	Measurement <ul style="list-style-type: none"> Money Number Consolidation. <ul style="list-style-type: none"> Place Value Addition and Subtraction 	Number <ul style="list-style-type: none"> Multiplication and Division Statistics 	Geometry: Properties of <ul style="list-style-type: none"> Properties of Shape Fractions 	Measurement <ul style="list-style-type: none"> Length and height Geometry <ul style="list-style-type: none"> Position and Direction. 	Measurement <ul style="list-style-type: none"> Time Mass, Capacity and Temperature Consolidation
Year 3	Number <ul style="list-style-type: none"> Place Value Addition and Subtraction 	Number <ul style="list-style-type: none"> Addition and Subtraction Multiplication and Division 	Number <ul style="list-style-type: none"> Multiplication and Division Measures <ul style="list-style-type: none"> Money Statistics	Measurement <ul style="list-style-type: none"> Length and Perimeter Number <ul style="list-style-type: none"> Fractions 	Number <ul style="list-style-type: none"> Fractions Measurement <ul style="list-style-type: none"> Time 	Geometry <ul style="list-style-type: none"> Properties of Shape Measurement <ul style="list-style-type: none"> Mass and Capacity
Year 4	Number <ul style="list-style-type: none"> Place value Addition and subtraction 	Measurement <ul style="list-style-type: none"> Length and perimeter Number <ul style="list-style-type: none"> Multiplication and division 	Number <ul style="list-style-type: none"> Multiplication and division Fractions Measurement <ul style="list-style-type: none"> Area 	Number <ul style="list-style-type: none"> Fractions Decimals 	Number <ul style="list-style-type: none"> Decimals Measurement <ul style="list-style-type: none"> Money Time 	Statistics Geometry <ul style="list-style-type: none"> Properties of shape Position and direction
Year 5	Number: <ul style="list-style-type: none"> Place Value Addition and Subtraction Statistics	Number: <ul style="list-style-type: none"> Multiplication and Division Measurement: Perimeter and Area 	Number: <ul style="list-style-type: none"> Multiplication and Division Number: <ul style="list-style-type: none"> Fractions 	Number: <ul style="list-style-type: none"> Fractions Number: <ul style="list-style-type: none"> Decimals and Percentages 	Number: <ul style="list-style-type: none"> Decimals Geometry: <ul style="list-style-type: none"> Properties of Shape 	Geometry: <ul style="list-style-type: none"> Position and Direction Measurement: Converting Units



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						Measurement: <ul style="list-style-type: none">• Volume
Year 6	Number: <ul style="list-style-type: none">• Place value• addition , subtraction, multiplication and division	Number: <ul style="list-style-type: none">• Fractions Geometry: <ul style="list-style-type: none">• Position and direction	Number: <ul style="list-style-type: none">• Decimals• Percentages• Algebra	Measurements: <ul style="list-style-type: none">• Converting units• Perimeter, area and volume Number: <ul style="list-style-type: none">• Ratio Statistics	Geometry: <ul style="list-style-type: none">• Properties of shape SATs consolidation and revision	Consolidation, investigations and preparation for KS3