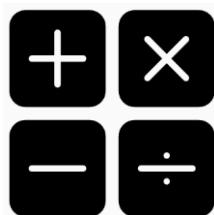




Maths



*Together we believe, achieve and enjoy*

# Our School Vision

*“Together, we believe, achieve and enjoy”*

*Through our vision, we serve our community by providing an inclusive, happy, secure and caring Christian environment where all are valued and respected. We believe that God loves all his children unconditionally and values the uniqueness of the individual and recognise the diversity and range of contributions that each child can make. In our maths curriculum, we place an important emphasis on mastery in mathematics, particularly real-life maths making it as meaningful as possible for our children.*

*Following the Church of England's Vision for Education 'Life in all its fullness' John 10:10, we provide a high-quality education within a creative, stimulating, encouraging and mutually supportive environment where children are enabled to develop the skills that they require to become successful in maths. Mathematics, a universal language that enables understanding of the world, is an integral part of the curriculum. Attainment in the subject is also the key to opening new doors to further study and employment.*

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# Our Five Crown Principles



Challenge



Resilience



Opportunities



Wellbeing



Knowledge

*Our five Crown Principles drive our maths curriculum.*

## Rationale for our Maths Curriculum

### Challenge

Through the 'challenge' curriculum driver we want our children to thrive on mathematical challenges. Within a teaching sequence, our children will be challenged in all three core aims of the maths curriculum: fluency, reasoning and problem solving. All staff have high expectations of pupils in lessons and expect them to demonstrate their understanding in a variety of ways using a concrete, pictorial, abstract approach.

### Resilience

Through the 'resilience' curriculum driver, we focus on resilience as a large element of our maths lessons. We have high expectations within our maths curriculum focusing on the mastery approach to teaching mathematics. Children develop fluency within a learning concept and then apply their knowledge to reasoning and problem-solving tasks to support their resilience when facing new challenges. Our feedback policy within maths also promotes

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resilience by encouraging our children to identify and correct their own misconceptions through teacher prompting and/or attempt a further challenge to develop their learning further.

### Opportunities

Through 'opportunities', we raise aspirations to broaden our children's horizons - opening their eyes to the myriad careers they might pursue. We strive to provide all children with mathematical experiences, not just in maths lessons, but in other lessons and events happening within school. Maths Ambassadors help facilitate and organise mathematics-based events and links. We have TTRockstars battles throughout the year to raise the profile of times tables. We strive to ensure our pupils have a clear understanding of the link between achieving well and having goals for the future.

### Wellbeing

At Queen's Park, we understand that happiness is linked to personal growth, health and development. We ensure our children are happy, healthy individuals. In maths, we aim for all children to be confident and happy mathematicians in every lesson. Work is adapted to meet the needs of all learners allowing children to feel confident, building self-esteem.

### kNowledge

Through the 'kNowledge' curriculum driver, we encourage our children to be resourceful learners. 'kNowledge' is a vital part of mathematics at Queen's Park. We don't just provide children with knowledge to apply to academic tests, we aim to make our children life-long mathematicians by linking maths to real life situations making it meaningful. Our teachers teach with the aim to ensure pupils have sufficient knowledge and attain proficiency in maths to progress through primary school and beyond.

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# Being a Queen's Park Mathematician



Mathematics at Queen's Park has its foundations set in the three core aims of the Primary National Curriculum: fluency, reasoning and problem solving.

Mathematics is an interconnected subject in which our young mathematicians need to move fluently between representations of mathematical ideas. Our young mathematicians need to develop automaticity in their recall of key facts and procedures and need to be able to quickly retrieve these facts from their long-term memory to apply them to more complex reasoning and problem-solving tasks.

Queen's Park mathematicians are provided with many opportunities to revisit prior learning throughout their learning journey through school and are challenged to deepen their knowledge with a focus on a mastery approach to deepen understanding.

To ensure all our children develop into confident, young mathematicians throughout their time at our school, our curriculum is the product of careful sequencing and linking of declarative, procedural and conditional knowledge.

- Declarative knowledge (facts and figures -I know that)
- Procedural knowledge (methods-I know how)
- Conditional knowledge (reasoning and problem solving - I know when)
- This knowledge will then lead to Conceptual Understanding (making mathematical connections - I know why...)

Throughout their time at our school, our young mathematicians develop their ability to explain and reason with their mathematical thinking in all areas of knowledge identified above.

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Our lesson structure, our sequential curriculum planning and our teachers' use of precise questions ensures our young mathematicians systematically acquire core mathematical facts, concepts, methods and strategies in order to become proficient mathematicians.

Our children are not only mathematicians within their maths curriculum; our Crown Curriculum provides opportunities to apply their mathematical knowledge and across the wider curriculum. Subject leaders have ensured that maths links in other subjects are exploited wherever possible and direct links to real life maths are embedded throughout the whole curriculum.

## Intent

Our maths curriculum offer ensures a well-planned, sequential curriculum is delivered throughout school, underpinned by the National Curriculum and its core aims that: all pupils be fluent in the fundamentals of mathematics, be able to reason mathematically by following a line of enquiry and are able to solve problems by applying their knowledge of mathematics.

### Long Term Plans for Maths

Our long-term plan is underpinned by the National Curriculum. Our maths long term plan ensures a sequential curriculum is delivered which allows pupils to learn, practise and become proficient with the facts and methods they need to secure their automaticity in fluency to then apply their understanding to reason and problem solve. There is a clear emphasis on revisiting prior learning (from previous year groups and from within a year group), providing opportunities to rehearse key concepts and deepening knowledge throughout the year with a focus on a mastery approach to deepen understanding. The sequence of learning within a year group has been strategically planned to ensure all opportunities for building on and retrieving prior learning are exploited. Our maths curriculum is designed to help pupils to gain increasing mathematical automaticity,

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which allows our children to build confidence in their ability and apply their knowledge to solve problems across all areas of the curriculum. An example of our long-term plan is shown below.

It is important to note, that based on the needs of a particular cohort, the topics maybe taught in a different order than shown on this plan.

## Maths Long Term Plan

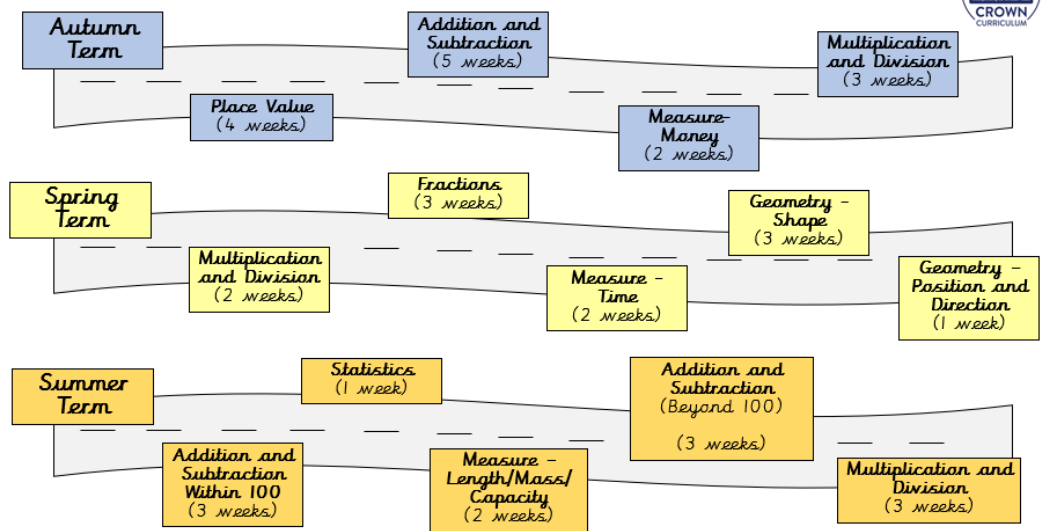
Year 2		Autumn 1		Autumn 2		
Year 2		Autumn 1		Autumn 2		
Autumn		Maths meetings Mastering number		Maths meetings Mastering number		
		<b>Number: Place Value</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward. Recognise the place value of each digit in a two-digit number (tens, ones)  Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs  Read and write numbers to at least 100 in numerals and in words  Use place value and number facts to solve problems.	<b>Addition and Subtraction</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>• a two-digit number and 10</li> <li>• add 3 1-digit numbers</li> <li>• a two-digit number and tens</li> <li>• two two-digit numbers (not crossing boundaries)</li> <li>• adding three one-digit numbers</li> </ul>	<b>Money</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • find different combinations of coins that equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	<b>Multiplication and Division</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising add and even numbers calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs Solve problems involving multiplication and division, using materials, arrays, repeated addition,	
		<b>Spring 1</b> <b>Maths meetings Mastering number</b>		<b>Spring 2</b> <b>Maths meetings Mastering number</b>		
		<b>Multiplication and Division</b>  <i>Recall of the facts 2s 3s 5s 10s</i> Place value – counting in 2s 3s 5s from 0 – Counting in tens from any number  <b>Include money</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising add and even numbers Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward – <b>use scales, money, measure</b>  Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.	<b>Fractions</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> Recognise, find, name and write fractions 1/3, 1/2, 2/4, and 3/4 of a length, shape, set of objects or quantity Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	<b>Time</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> Compare and sequence intervals of time Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times Know the number of minutes in an hour and the number of hours in a day.	<b>Geometry</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2-D and 3-D shapes and everyday objects.	<b>Position and Direction</b>  <i>National curriculum learning outcomes</i> <b>Pupils should be taught to:</b> order and arrange combinations of mathematical objects in patterns and sequences Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

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	Summer 1			Summer 2	
	Maths meetings Multiplication 5x and 10 x tables			Maths meetings Multiplication 2x tables	
Summer	<p><b>Addition and Subtraction (within 100)</b></p> <p><i>National curriculum learning outcomes</i></p> <p><b>Pupils should be taught to:</b></p> <p>Add 2-digit to 1 digit crossing boundaries</p> <p>Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</p> <p>a two-digit number and tens</p> <p>a two two-digit numbers</p> <p>a adding three one-digit numbers</p> <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems</p>	<p><b>Statistics</b></p> <p><i>National curriculum learning outcomes</i></p> <p><b>Pupils should be taught to:</b></p> <p>Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</p> <p>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</p> <p>Ask and answer questions about labelling and comparing categorical data</p>	<p><b>Measurement</b></p> <p><i>National curriculum learning outcomes</i></p> <p><b>Pupils should be taught to:</b></p> <p>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (<math>^{\circ}</math>C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</p> <p>Compare and order lengths, mass, volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math></p>	<p><b>Addition and Subtraction (beyond 100)</b></p> <p><i>National curriculum learning outcomes</i></p> <p><b>Pupils should be taught to:</b></p> <p>add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> <li>a two two-digit numbers</li> <li>a adding three one-digit numbers</li> </ul> <p>a show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>a recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems</p>	<p><b>Multiplication and Division</b></p> <p><i>National curriculum learning outcomes</i></p> <p><b>Pupils should be taught to:</b></p> <p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (<math>\times</math>), division (<math>\div</math>) and equals (<math>=</math>) signs</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</p>

Our Long Term Plans are supported by an overview of coverage for each year group which is outlined on our maths roadmaps.

## Year 2 Coverage Roadmap for Maths



## Progression in Maths

### Medium Term Plans for Maths

Our medium-term planning documents clearly outline each unit objectives from the National Curriculum and the carefully planned,

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sequential smaller steps which children need to master to achieve the intended end point objective. Our medium-term plans clearly link to prior learning opportunities from both within a year group's curriculum and from previous year's teaching, promote understanding of the interconnected concepts within mathematics and provide opportunities for rehearsal of key concepts. Within a sequence of learning, where applicable, key declarative and procedural knowledge are sequenced together to reflect the reciprocal learning relationship between them. Once secure, opportunities to develop conditional knowledge through application to reasoning and problem solving are planned.

The medium-term plans include regular pre and post assessment opportunities to ensure that the teaching of mathematics is targeted to our individual children's needs through adaptive planning following regular low stake, formative assessment opportunities. Our pre assessments assess if the children's key knowledge and understanding from the previous year groups learning is secure. Analysis of these assessments allows teachers to effectively establish the accurate starting point within their lesson sequence and/or target individual children who require further targeted intervention. Our post assessments assess the children's knowledge and understanding of the learning taught within part of a sequence to allow teachers to assess whether the children have the secure knowledge and understanding to progress to a subsequent step or whether they require further targeted intervention. This ensures that new content is not taught to our children until we are confident that they have embedded knowledge of the pre-requisites required to ensure later success. An example of part of our medium-term planning is below:

## Queen's Park C.E./U.R.C Primary School Medium Term Planning: Maths



### Year 6 Addition and Subtraction Progression Steps

#### Long Term Plan Coverage (taken from National Curriculum):

Pupils should be taught:

- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate

\*Make sure your problem solving includes units of measure throughout this unit and multi-step problems

#### Pre Assessment 1 Coverage (this covers progression step 1)

Year 5 curriculum for mental calculation including:

\*counting forwards and backwards in multiple of powers of 10

\*number bonds

\*using place value knowledge of powers of 10 to add and subtract mentally

$370,000 + 41,000 = \square$

$288,888 + 1,000 + 1,000 = \square$

$750,000 - 60,000 = \square$

$402,900 - 1,000 - 1,000 = \square$

#### Progression Step 1:

- Add and subtract numbers with increasing value using mental methods (Make sure you teach the skill of estimation throughout this step)

#### Link to National Curriculum

- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

#### Possible Pre Learning to be revisited

Depending on your outcome of your pre assessment, you may need to revisit the year 5 objectives (see pre assessment coverage above).

#### White Rose Small Steps which could be used

Add and subtract integers (select the mental methods from this planning)

#### Post Assessment End Point

$980,000 - 450,000 = \square$

$23,005 - \square = 21,006$

$\square + 3,500 = 8,400$

Cars for sale: price list	
Car A	£2,750
Car B	£19,500
Car C	£24,999
Car D	£45,000

a) Estimate the total cost of all four cars.

Cars for sale: price list	
Car A	£2,750
Car B	£19,500
Car C	£24,999
Car D	£45,000

b) Estimate the difference in price between the most expensive car and the least expensive car.

$3,050,020 - 3,000,000 = \square + 20$

For a complete example of a long sequence, please see our example medium term planning on our school website.

## Progression Sequences

Our maths curriculum is specifically planned to ensure clear progression across a sequence of learning (including revisiting prior knowledge from previous learning) and progression within the teaching of a step, with opportunities planned to embed a sequential progression from concrete to pictorial to abstract. The progression from fluency and automatic recall of declarative and procedural knowledge to application of this through conditional knowledge to reasoning and problem solving is also embedded into each small progression step of teaching. This allows our children to embed a secure, deep understanding of mathematical concepts alongside exploring opportunities to apply their learning.

Progression in the teaching of calculation across school is also strategically planned and is displayed within our Calculation Policy. This ensures sequential learning is embedded across year groups when teaching calculation strategies so that children always build on prior knowledge when learning a new concept, whilst progressing ultimately to the most efficient method. Calculation methods are taught across the school by linking manipulatives with formal and informal methods, e.g., use of ten grids leading to pictorial methods then to formal addition and subtraction. Within the teaching of calculation, the explicit teaching of vocabulary is also planned to be sequential, with new vocabulary teaching building on prior learning throughout the teaching of calculation across the school. This is outlined within the Calculation Policy, an example of which can be seen below:

Some of the strategies in the document below may be used in more than one of the CPA representations dependent upon the context in which they are taught.

### Addition – EYFS

ELG Number: Children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.



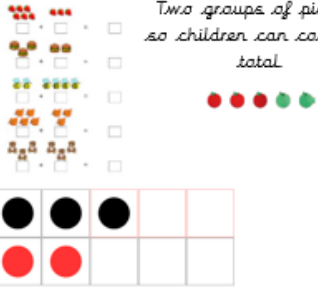
### EYFS Vocabulary.

#### Number

Zero, number, one, two, three ... to twenty and beyond, tens numbers, eleven, twelve ... twenty, none, how many ...? count, count (up) to, count on (from, to), count back (from, to), count in ones, twos, fives, tens, is the same as, more, less, odd, even, few, pattern, pair

#### Addition

Key language which should be used: total, parts and wholes, plus, add, altogether, more than, equals, 'is equal to' 'is the same as' column, place value, counting forward, more, add, make, total, double, most, count on, number line, part, part, whole

Objectives	Concrete	Pictorial	Abstract
<ul style="list-style-type: none"> <li>Find the total number of items in two groups by counting all of them. (including doubling.)</li> </ul>	<p>Use toys and general classroom resources for children to physically manipulate, group/group.</p>  <p>Use specific math's resources such as counters, cubes, rekenrek etc.</p> 	<p>Two groups of pictures so children can count the total</p> 	<p>A focus on symbols and numbers to form a calculation</p> $5+2=7$

# Vocabulary

## Vocabulary is V.I.T.A.L in Maths

### Valued

We value vocabulary in maths and it underpins everything we do.

### Identified

Mathematical vocabulary is identified by the teacher in every maths lesson and is explicitly planned for. It has also been highlighted with the Calculations Policy by the maths lead to ensure progression across school.

### Taught

Vocabulary is explicitly taught in every lesson. It is an integral part of our seven-part lesson structure. Vocabulary is displayed on our working walls.

### Applied

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Once vocabulary is taught, it is applied. Children apply their vocabulary in their talk tasks and by using and identifying it with their independent tasks. Mathematical vocabulary will be used in reasoning and problems solving tasks, to further embed children's understanding and within assessment outcomes in maths.

### *Learned*

Vocabulary is revisited and relearned. Vocabulary sticks in the children's long-term memory. Lesson by lesson, year by year, children revisit and relearn key mathematical vocabulary.

## *Early Years Foundation Stage*

Through an 'explosion of experiences', our youngest mathematicians are exposed to the foundations of their maths learning. Carefully planned maths experiences are provided for our children. High quality lessons, stories and rhymes and continuous provision in EYFS provides the building blocks for our Queen's Park mathematicians. Maths vocabulary is planned for and staff ensure children are exposed to the correct terminology when exploring experiences that have mathematical links. Staff are role models in demonstrating mathematical vocabulary and this is further enhanced in our excellent provision. The foundations of maths learning in EYFS is linked to Year 1 and beyond.

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# Implementation

## Pedagogy



Both our staff and children are enthusiastic about maths. Through ongoing quality CPD, we strive to ensure our teachers have expert knowledge of the maths that they teach. Our pedagogy is firmly based upon our curriculum intent of embedding concepts into long-term memory so that they can be recalled and to ensure declarative, procedural knowledge and conditional knowledge are being taught throughout our curriculum leading to conceptual understanding.

Our 'Queen's Park Quality First Teaching' model ensures that all lessons are effective, efficient, and equitable. Lessons are effectively sequenced so that new knowledge and skills build on what has been taught before and towards defined end points. All lessons are planned to reflect the sequence of learning identified on the medium-term plans. Maths lessons include scaffold or challenge to ensure all learners, including those with SEND, access a well-planned and meaningful maths curriculum. If appropriate, these lessons are modified to meet the needs of the individual.



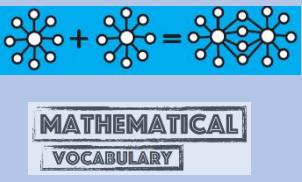

We ensure a systemic, instructional approach is adopted in all our lessons where children are provided with opportunities to deploy and recall knowledge as well as apply and reason. Our seven-part lesson structure has been strategically designed based on research from the Education Endowment Foundation and Rosenshine Principles to ensure efficiency in every lesson.

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## Queen's Park Maths lesson Seven part lesson structure



	<p style="text-align: center;"><b>Lesson Part 1: Focus on Feedback</b></p> <p>This part of the lesson allows for children to revisit their learning from the previous lesson to address any misconceptions or to complete a challenge for retrieval practice or to further deepen their knowledge of a concept. Feedback from the previous lesson should provide children with prompts to address misconceptions to promote resilience or where necessary should provide specific, accurate and clear feedback focusing directly on the misconception.</p>
	<p style="text-align: center;"><b>Lesson part 2: Recap</b></p> <p>This part of the lesson allows for retrieval practice of previous learnt knowledge, concepts or processes. Depending on the outcome of teacher assessment from the previous lesson, this could also include revisiting a misconception at a whole class level. The task should allow for consolidation of prior learning and promote the application of this to other topics where appropriate.</p>
	<p style="text-align: center;"><b>Lesson Part 3: Hook</b></p> <p>Maths vocabulary is introduced or in some cases revisited at the start of the hook. Explicit teaching of new vocabulary is taught here including the teaching of the vocabulary in a context where applicable. Retrieval practice of key vocabulary is also completed.</p> <p>The key learning should be shared with the pupils at the start of the Hook. The 'hook' is an introduction to the new learning. New learning is taught by progression through concrete, pictorial, and abstract representation where appropriate. Effective teacher modelling is evident during this part of the lesson with teachers clearly modelling their own mathematical thinking. Teachers ensure that core content is well embedded first within a sequence of lessons before progressing to application within problem solving and reasoning to ensure depth and breadth of mathematical understanding.</p>
	<p style="text-align: center;"><b>Lesson Part 4: Talk Time</b></p> <p>Talk time allows the children to rehearse or apply their learning from the hook (depending on the focus on the lesson and its position within a sequence) before progressing to independent learning. Children should be encouraged to make connections with previous learning through active learning. This section could involve pupils using concrete materials or interpreting representations and concepts. Children will be expected to use the correct mathematical language when exploring concepts within talk time and this will be explicitly modelled by the adults in class. The talk task is a crucial opportunity for assessment; all adults need to circulate so</p>

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	<p>that a clear picture of pupils' understanding emerges and can impact on the subsequent segments as required.</p>
	<p style="text-align: center;"><b>Lesson Part 5: Review</b></p> <p>The review section allows for consolidation of learning in previous parts of the lesson and provide teachers with an opportunity to address any common misconceptions identified through their assessment in the talk task. This ensures that misconceptions are effectively addresses to prevent them from leading to a systematic pattern of errors. This part of the lesson should be reactive and not necessarily pre-planned.</p>
	<p style="text-align: center;"><b>Lesson Part 6: Independent Task</b></p> <p>The independent task allows for children to practise or apply their learning. Depending on where the lesson is within the learning sequence, the independent task may include fluency, reasoning, or problem-solving tasks. Lessons towards the start of a sequence will typically include rehearsal of fluency strategies to develop automaticity with opportunities to apply their knowledge to reasoning and problem-solving tasks later within a sequence. This is a vital opportunity for assessment and all adults in the class provide immediate feedback through live marking.</p>
	<p style="text-align: center;"><b>Quiet Thinking Time.</b></p> <p>Within a lesson, children should be provided with the opportunity to explore their mathematical learning in a quiet learning environment, allowing for deep concentration and exploration of their own mathematical thinking. This may vary in position within a lesson depending of the task which have been planned.</p>
	<p style="text-align: center;"><b>Lesson Part 7: Plenary</b></p> <p>The plenary is an essential opportunity to consolidate learning, gauge levels of understanding and develop pupils' skills in explaining, reasoning and justifying where appropriate. This part of the lesson provides teachers with immediate, formative assessment of the children's understanding from the lesson and any misconceptions which may need to be addressed either within this part of a lesson or at the start of the next lesson.</p>



## Maths Meetings

In addition to our daily maths lessons, all year groups in school also access a daily maths meeting lesson. This is a short lesson which focuses on the retrieval of key declarative knowledge to promote automaticity of core facts. Coverage and sequencing of learning for maths meetings is informed by the outcome of question level analysis of assessments for each key stage.

In the academic year 2022 - 2023, EYFS and Key Stage One are delivering the NCETM'S Mastering Number programme to develop secure firm foundations in the development of number sense to ensure fluency in calculation and confidence and flexibility with number.

Children in Key Stage Two are developing their fluency and automaticity in the recall of multiplication and division facts through the delivery of our own multiplication and division facts programme which is based on diagnostic assessments.

## Resources

Our teachers have access to a range of resources to support the teaching of maths in school. We do not follow a published scheme, but staff do have access to the White Rose programme to use as a resource to support the teaching of our medium-term plans. Other resources used include materials from a local maths consultant, NCTEM and Third Space maths. The Mastering Number programme is used throughout EYFS and Key Stage 1.

## Intervention

Our maths curriculum offer ensures all our children receive effective, high-quality teaching in the classroom every day; however, we understand that on occasions children may require additional intervention to develop and deepen their learning. Our comprehensive intervention strategy is underpinned by the EEF's research into effective intervention. Our pre and post assessments heavily inform our intervention strategy within maths alongside formative assessment within a learning sequence. Live marking during a lesson allows for immediate intervention to address misconceptions or deepen understanding. Some children may also be identified through

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assessment as benefitting from a pre teach maths session with the class teacher prior to a lesson to ensure pre-requisite knowledge is secure. Within the school day, a child may also access mop up maths intervention, one to one or a small group targeted intervention (e.g. through IPP targeted work) or computer based intervention programmes such as Times Tables Rockstars or Numbots. We also run interventions outside of the school day through school led tutoring which identified children are invited to attend.

## Impact

We understand that we may not see the true impact of our maths curriculum on our children as our maths curriculum is just the beginning of a lifetime of learning.

Our well-constructed and well-taught maths curriculum leads to great outcomes. At Queen's Park, our philosophy is that broad and balanced leads to great outcomes and meeting end points at the end of each key stage. National assessments are useful indicators of the outcomes our children achieve.

We ensure all groups of children are given the knowledge and cultural capital they need to succeed in life. We strive to ensure that our children are equipped with the skills (through a growth mindset approach) to fluently be able to retrieve key facts from their semantic memory.

The quality of our children's work, at every stage, is of a high standard. All learning is built towards an end point and at each stage of their education, we prepare our children for the next stage.

We ensure all our children are fluent in maths to a stage appropriate level with the ultimate aim of proficiency in maths for all our children.

The impact of Queen's Park maths curriculum is measured through the following:

*Together we believe, achieve and enjoy*

- *Assessment - including low stake pre and post assessments within a learning sequence assessing what the children have been taught as well as a summative termly assessment to assess learning in the long term memory*
- *National test data*
- *Pupil voice*
- *Progress evident in children's books*
- *Seeking views of parents where appropriate*
- *Progress evident in children's books and record of experiences*
- *Seeking views of parents where appropriate*