



### **Aims:**

In line with the National Curriculum (2014), the teaching of maths within the academy should aim for children to:

- *Become fluent in the fundamentals of mathematics, including practice at increasingly complex problems, so that children can use and apply their knowledge practically.*
- *Reason mathematically by following a line of enquiry, establishing relationships and generalisations, and developing an argument, justification or proof using mathematical language.*
- *Solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into smaller steps and persevering.*

In addition, at QPA we aim to ensure that all pupils develop:

- Conceptual understanding of number, measurement, geometry and statistics;
- A wide range of written and mental methods that they can use to answer questions and solve problems;
- A broad range of skills which can be applied both within the academy (across a range of curriculum areas) and within their everyday lives;
- A deep and lasting interest in mathematics.

### **Classroom Provision:**

- All pupils are entitled to a broad mathematics curriculum in which their learning needs and preferred learning styles are identified and met.
- The delivery of the mathematics curriculum should provide the children with the opportunity to engage in practical activities, maths games and problem solving.
- Maths activities can be completed individually, in small groups, or as a whole class.
- Opportunities to use ICT should be provided.
- Mathematical talk is essential to conceptual understanding; classrooms should be rich in pupil-to-pupil discussion as well as between teacher and pupils.

### **Problem Solving and Reasoning:**

There is a focus on including problem solving and reasoning opportunities in every lesson for all pupils to ensure that pupils are able to use and apply their knowledge throughout. This application of skills shows a deeper understanding of the concepts being taught.



Calculation Policy: - see *QPA Calculation Policy*

This clearly shows the progression of skills for each strand, across the year groups, and can be found on the server or in hard copy. Professional judgement should be used to ensure that children are working on and using appropriate methods for their current attainment. For consistency, only the methods set out in the Calculation Policy should be taught. Any questions regarding the teaching of the methods within the Calculation Policy need to be addressed to the Mathematics Leader of Learning.

Mathematics in the Foundation Stage:

- In the Foundation Stage, maths activities should be provided for the children to access independently, in order for them to practise their skills, or through an adult led activity, in order for the children's understanding to be strengthened.
- Discrete, ability set 'number time' sessions are provided daily. These sessions are taught for 15-20 minutes and provide adults with additional time to target children's basic number skills.

Mathematics in Key Stages 1 and 2:

*The Daily Mathematics Lesson:*

The pupils in each year group in KS1 and KS2 are taught in mixed ability classes and are provided with activities adapted as needed to meet individual needs. The mathematics lesson is taught for 1 hour per day in KS1 and KS2, following a learning journey approach and developing the use of the Teaching for Mastery Five Big Ideas (NCETM Teaching for Mastery Sustaining Work Group, 2024-25). Each mathematics lesson should include the following (Years 1-6):

- Flashback 4 - a 5-minute daily task using the principles of spaced learning (one question linked to yesterday, one question linked to last week and two questions related to concepts covered at least one month ago). NOTE: Y2-6 will use the previous year's White Rose Flashback 4 to ensure this is a 5-minute quick recall of previously taught material. This session will be recorded for Y4-6 in 40ps exercise books (see below).
- A short mental/oral starter - an opportunity to practise basic facts and skills (this may occur at another point during the school day, as appropriate).
- The main teaching (developing a mastery approach)
  - Put into an appropriate context/problem to encourage mathematical discussion and deepen the understanding of concepts being taught (White Rose 'True or False' problem or similar).
  - Small steps learning journey carefully planned for all pupils, considering the Five Big Ideas (Representation & Structure, Mathematical Thinking, Variation, Fluency and Coherence).
  - Focus on meaningful talk throughout (using sentence stems, key vocabulary and making connections).



- Plenary / mini-plenaries, as appropriate.
- Years 2-6: One main teaching session per week should focus on arithmetic (taught session, using PiXL resources).

#### *The Daily 4 Ops Session:*

In addition to the 1-hour maths lesson, pupils in KS2 also take part in a 15-minute 4 Ops Session:

- Each class has a 15-minute daily timetabled slot to focus on the 4 Operations.
- **It is expected that one operation be focused on per day (unless given a specific focus by the Maths Lead based on PiXL Arithmetic QLA), with one weekly session used for PiXL PrimaryWise 3 in 3 (KS2).**
- This time is designed for children to focus on calculation strategies, both mental and written forms, and should be used as an opportunity for them to continually work on and refine these skills.
- It is important that teachers are using this time effectively; planning and working with small groups during these sessions should ensure that children are secure with skills and are progressing.
- The development of skills which should be covered in these sessions is clearly outlined in the calculation policy (see QPA Calculation Policy).
- All pupil work completed during the 4 Ops session should be recorded in 4 Ops exercise books under the short date.

#### Mastering Number (F2-Y2)

Each class has an additional 15-minute daily timetabled slot\* to focus on developing fluency in calculation and number sense (4 days). It is important that teachers are using this time effectively and following the NCETM planning, guidance and training. One session per week will be used for Mental Maths.

\*Foundation Stage can be flexible in the way this daily session is delivered and it may be taught within 'number time'.

#### *Mental Maths: - see QPA Mental Maths Policy*

- A programme of basic facts and times tables learning is in place in each year group.
- Times Table Rockstars (TTRS) provides a personalised learning programme for pupils to develop their multiplication skills (Y2-6). Weekly TTRS sessions are timetabled for each class (Y3-5) and pupils are encouraged to play the TTRS games regularly at home.
- NumBots provides a personalised learning programme for pupils to develop their addition and subtraction skills (Y1-3). Regular NumBots sessions are



timetabled for each class (at least 2 x per week) and pupils are encouraged to play the NumBots games regularly at home.

- Other opportunities for developing mental strategy skills will be planned and taught during maths lessons, Mastering Number / 4Ops sessions and other points in the school day.

**Presentation of Mathematics Work:** - see *QPA Handwriting & Presentation Policy*

- All pupils in KS1 and KS2 use a pencil for mathematical calculations and squared exercise books to aid setting out of calculations.
- The date is recorded in figures.
- All work should be presented in-line with QPA's Handwriting and Presentation Policy.
- Pupils in the Foundation Stage use a variety of media but much of the work is practical.

**Review and Feedback:** - see *QPA Marking & Feedback Policy*

- Children are to be actively encouraged to be involved in the reviewing of their work, either through self- or peer-marking, using purple polishing pens.
- Teachers are to ensure that feedback is kept up-to-date to ensure that the pupils receive prompt feedback after the work that they have completed.
- Feedback should make clear the next steps in the pupil's mathematical learning.
- Children should be encouraged to respond to the teacher's comments in their feedback using purple polishing pens, to show open dialogue to help improve and move learning on.
- All work should be marked in-line with QPA's Marking and Feedback Policy.

**Planning:**

**Planning in the Foundation Stage:**

- 'Development Matters in the Early Years Foundation Stage' and 'EYFS Framework' are the main documents used to inform planning within the EYFS.
- Medium-term planning is informed by these documents which provide progressive development statements within age/stage bands. These statements suggest a child's typical range of mathematical development.
- Daily 'number time' plans are separate to any other form of planning and are based upon a child's/group's immediate, number themed next step.



### Planning in Key Stages 1 & 2:

- Planning is based on the material provided in the National Curriculum 2014, NCETM/DfE Ready to Progress (RtP) Criteria and White Rose Materials for each year-group.
- Medium- and long-term planning is informed by these documents which map out the mathematics curriculum for each year group. Weekly plans, which give specific detail of daily learning objectives and appropriate differentiated activities, should then be developed from this.
- The QPA Calculation Policy should be referred to and followed at the planning stage.
- NCETM Materials may also provide additional support and resources in the planning process.

### Assessment:

- All teachers will make on-going assessments and respond appropriately to pupils during 'day-to-day' teaching. These 'immediate' responses are either verbal or recorded, depending on the nature of the task.
- All teachers will adjust planning and teaching within mathematics topics in response to pupils' performance.
- Teachers in the Foundation Stage will assess their pupils using 'EYFS Framework'. A final judgement is made using the 'Early Years Foundation Stage Profile' at the end of F2.
- Teachers in Years 1 to 6 will assess their pupils informally (the QPA Maths Assessment Criteria for each year-group, based on the Ready to Progress Criteria) as an on-going process throughout the year.
- Years 2 to 6 will be formally assessed termly, using the year appropriate termly PiXL arithmetic and reasoning mathematics tests.
- Year 2 and year 6 will undertake the mathematics tests as part of their SAT assessments.
- Year 1 and Year 5 will undertake the Year 2 and Year 6 mathematics SAT assessments at the end of the year.
- Year 4 will undertake the Y4 MTC (Multiplication Check) in June.
- Moderation of mathematics for all year-groups will take place both within the academy (internal) and across the Trust and Leicester City DG West (external).

### The Learning Environment:

The maths learning environment in each classroom will reflect age-related expectations (see NC 2014; QPA Maths Assessment Criteria). All classrooms will have at least one display board set up as a maths learning wall.



### The Learning Environment Non-Negotiables in the Foundation Stage:

The following are to be evident in each Foundation Stage classroom at all times:

- A clearly defined maths area within each classroom.
- An age-appropriate number line (F2 Numicon number line 0-20; F1 Numicon number line 0-10 then progress to 20).
- 0-20 pedagogs number bunting
- Key maths vocabulary
- Evidence of children's work (updated regularly).
- Maths equipment in other areas of the classroom to prompt the use of core skills in everyday situations, linked to current learning (e.g. tape measure and metre sticks in the construction area; weighing scales in the malleable area; telephones and directories in the role play etc.).
- Maths Mascot to be used in every 'number time' session to promote problem solving (F2 Maths Monkey).

### The Learning Environment Non-Negotiables in Key Stages 1 & 2:

The following are to be displayed at all times:

- Maths key vocabulary & strategies for all four operations (4 Ops, following calculation policy).
- Mental maths basic facts (appropriate for year-group).
- Problems / links to Greater Depth work to challenge and inspire.
- Key questions (*What do you notice? What's the same? What's different?*).
- Reasoning prompts (KS1 or KS2).
- Place value headings (appropriate for year-group).
- 100-square / number lines (appropriate for year-group - see below).

#### Year-group specific requirements (non-negotiables):

- F1: Numicon number line 0-10 then progress to 20
- F2: Numicon number line 0-20 and 100 square.
- Year 1: 100-square; number line to 100; counting in 10s/2s/5s; numbers 1-20 in numerals and words; number bonds and related subtraction facts to 20.
- Year 2: 100-square; number line to 100; counting in 3s; numbers to 100 in numerals and words; number bonds and related subtraction facts to 20 and 100, place value headings/chart (hundreds, tens and ones); multiplication



and division facts for the 2, 5 and 10 multiplication tables; odd and even numbers.

- Year 3: number line to 100; numbers to 1,000 in numerals and words; place value headings (thousands, hundreds, tens and ones); multiplication and division facts for the 3, 4 and 8 multiplication tables.
- Year 4: numbers to 9,999 in numerals and words; place value headings (thousands, hundreds, tens, ones, tenths and hundredths); multiplication and division facts for multiplication tables up to  $12 \times 12$ .
- Year 5: numbers to 1,000,000 in numerals and words; place value headings (millions, hundred thousands, ten thousands, thousands, hundreds, tens, ones, tenths, hundredths and thousandths); multiplication and division facts for multiplication tables up to  $12 \times 12$ ; *prime numbers, prime factors, square and cube numbers (add when introduce)*.
- Year 6: numbers to 10,000,000 in numerals and words; place value headings (ten millions, millions, hundred thousands, ten thousands, thousands, hundreds, tens, ones, tenths, hundredths and thousandths); multiplication and division facts for the multiplication tables up to  $12 \times 12$  (& divisibility rules); square and cube numbers, *prime numbers, prime factors, common factors, common multiples (add when introduce)*.

**The above divisions will be dependent on individual classes and pupil ability within them; they are end of year expectations.**

The following will be linked to the current maths topic:

- Focus for the week (age-appropriate, linked to current maths topic - see QPA Maths Medium Term Planning).
- Maths key vocabulary for the current maths topic.
- Evidence of modelled work as learning prompts (linked to current maths topic, following calculation policy).
- A challenge area (linked to current maths topic).
- Examples of pupils' independent work (linked to current maths topic).

#### Resources:

Within the Calculation Policy there is a particular focus on ensuring that lessons are kept as practical as possible. Maths resources to support learning and understanding should be available for children to use within lessons.

We will judge the success of our mathematics teaching by:

- The motivation and interest displayed by our pupils
- KS1 and KS2 SAT results



- Success in meeting targets
- Data analysis
- Book scrutiny
- Observations of the teaching of mathematics (including learning walks)

### **The role of the Mathematics Leader of Learning:**

The Mathematics Leader of Learning will:

- Lead the development of this policy and all linked policies throughout the academy;
- Work closely with the Principal;
- Provide guidance and support to all academy personnel on the planning, teaching and assessment of mathematics;
- Support staff in preparing children for the end of key stage tests in mathematics;
- Annually report to the Principal on the success of this policy.

### **Monitoring the effectiveness of the Policy:**

The practical application of this policy will be reviewed annually or when the need arises by the Mathematics Leader of Learning, the Principal and other members of the SLT.

### **Key documents supporting this document include:**

- National Curriculum 2014 Mathematics Programme of Study
- QPA Maths Assessment Criteria (Appendix A)
- QPA Mathematics Yearly Overviews (Appendix B)
- QPA Maths Medium Term Planning Documents - *currently supported by White Rose (available in Planning Folder 2024-25 - Maths 2024-25)*.
- QPA Calculation Policy
- EYFS Profile
- EYFS Framework
- Development Matters in the EYFS
- QPA Mental Maths Policy
- White Rose Materials (schemes of work and premium resources)
- NCETM/DfE Ready to Progress Criteria (in *Mathematics Guidance* document)
- NCETM RtP Exemplification PowerPoints





- NCETM Curriculum Prioritisation Documents
- NCETM Mastery Documents
- NCETM Professional Development Materials
- PiXL Termly Assessments
- PiXL PrimaryWise 3 in 3
- Academy monitoring documents



Appendix A - QPA Maths Assessment Criteria:

Year 1 Maths Expectations

End of Year 1 Expectations (taken from NC Mathematics PoS, 2013)	
Number – Number and Place Value	<ul style="list-style-type: none"> <li>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</li> <li>Count, read and write numbers to 100 in numerals</li> <li>Count in multiples of twos, fives and tens</li> <li>Given a number, identify one more and one less</li> <li>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</li> <li>Read and write numbers from 1 to 20 in numerals and words.</li> </ul>
Number – Addition and Subtraction	<ul style="list-style-type: none"> <li>Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs</li> <li>Represent and use number bonds and related subtraction facts within 20</li> <li>Add and subtract one-digit and two-digit numbers to 20, including zero</li> <li>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = ? - 9</math>.</li> <li>Use the vocabulary: put together, add, altogether, total, take away, distance between, difference between, more than and less than.</li> </ul>
Number – Multiplication and Division	<ul style="list-style-type: none"> <li>Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.</li> <li>Make connections between arrays, number patterns, and counting in twos, fives and tens.</li> </ul>
Number - Fractions	<ul style="list-style-type: none"> <li>Recognise, find and name a half as one of two equal parts of an object, shape or quantity</li> <li>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</li> </ul>
Measurement	<ul style="list-style-type: none"> <li>Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]; mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]; and time [for example, quicker, slower, earlier, later]</li> <li>Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; and time (hours, minutes, seconds)</li> <li>Recognise and know the value of different denominations of coins and notes</li> <li>Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]</li> <li>Recognise and use language relating to dates, including days of the week, weeks, months and years</li> <li>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.</li> </ul>
Geometry – Properties of Shapes, Position and Direction	<ul style="list-style-type: none"> <li>Recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles]; and 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].</li> <li>Describe position, direction and movement, including whole, half, quarter and three-quarter turns.</li> </ul>



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**Year 1 Maths Assessment Criteria**

Use the \*2020 DfE guidance ready-to-progress criteria, listed in the table below.

	Previous experience	Evidence / notes	Year 1 ready-to-progress criteria	Evidence / notes
<b>N u m b e r s  a n d  P l a c e  V a l u e</b>	Begin to develop a sense of the number system by verbally counting forward to and beyond 20, pausing at each multiple of 10.		<b>1NPV-1</b> Count within 100, forwards and backwards, starting with any number.	
	Play games that involve moving along a numbered track and understand that larger numbers are further along the track.		<b>1NPV-2</b> Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$ .	
<b>N u m b e r  f a c t s</b>	Begin to experience partitioning and combining numbers within 10.		<b>1NF-1</b> Develop fluency in addition and subtraction facts within 10.	
	Distribute items fairly, for example, put 3 marbles in each bag. Recognise when items are distributed unfairly.		<b>1NF-2</b> Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.	
<b>A d d i t i o n a n d  S u b t r a c t i</b>	Understand the cardinal value of number words, for example understanding that 'four' relates to 4 objects. Subitise for up to 5 items. Automatically show a given number using fingers.		<b>1AS-1</b> Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.	
	Devise and record number stories, using pictures, numbers and symbols (such as arrows).		<b>1AS-2</b> Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.	



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o n G e o m e t r y				
	See, explore and discuss models of common 2D and 3D shapes with varied dimensions and presented in different orientations (for example, triangles not always presented on their base).		<b>1G–1</b> Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.	
	Select, rotate and manipulate shapes for a particular purpose, for example rotating a cylinder so it can be used to build a tower or rotating a puzzle piece to fit in its place		<b>1G–2</b> Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.	

\*DfE Guidance: 'Teaching mathematics in primary schools June 2020', can be downloaded in full, or per year group, from this page: [www.gov.uk/government/publications/teaching-mathematics-in-primary-schools](http://www.gov.uk/government/publications/teaching-mathematics-in-primary-schools) Summary tables on pages 9-15 (of the full, Years 1-6 document) track criteria across year groups. Within the year group documents, the 'Making connections' blue boxes, detail connections across criteria.

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
TA						
Academy Moderation						
Trust Moderation						



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Year 2 Maths Expectations

<b>End of Year 2 Expectations (taken from NC Mathematics PoS, 2013)</b>	
<b>Number – Number and Place Value</b>	<ul style="list-style-type: none"> <li>• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</li> <li>• Recognise the place value of each digit in a two-digit number (tens, ones)</li> <li>• Identify, represent and estimate numbers using different representations, including the number line</li> <li>• Compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> <li>• Read and write numbers to at least 100 in numerals and in words</li> <li>• Use place value and number facts to solve problems.</li> </ul>
<b>Number – Addition and Subtraction</b>	<ul style="list-style-type: none"> <li>• 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</li> <li>• Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</li> <li>• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers</li> <li>• Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</li> <li>• Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</li> </ul>
<b>Number – Multiplication and Division</b>	<ul style="list-style-type: none"> <li>• Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> <li>• Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs</li> <li>• Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</li> <li>• Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</li> </ul>
<b>Number - Fractions</b>	<ul style="list-style-type: none"> <li>• Recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity</li> <li>• Write simple fractions for example, <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math>.</li> </ul>
<b>Measurement</b>	<ul style="list-style-type: none"> <li>• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</li> <li>• Compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> <li>• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</li> <li>• Find different combinations of coins that equal the same amounts of money</li> <li>• Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</li> <li>• Compare and sequence intervals of time</li> <li>• 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</li> </ul>



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<b>Geometry – Properties of Shapes, Position and Direction</b>	<ul style="list-style-type: none"> <li>• Know the number of minutes in an hour and the number of hours in a day.</li> <li>• Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</li> <li>• Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> <li>• Identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid]</li> <li>• Compare and sort common 2-D and 3-D shapes and everyday objects.</li> <li>• Order and arrange combinations of mathematical objects in patterns and sequences</li> <li>• 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 anticlockwise).</li> </ul>
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**Year 2 Maths Assessment Criteria**

Use the \*2020 DfE guidance ready-to-progress criteria, listed in the table below.

Number and Place Value	Year 2 ready-to-progress criteria	Evidence / notes
<b>Number and Place Value</b>	<b>2NPV–1</b> Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.	
	<b>2NPV–2</b> Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.	
<b>Number Facts</b>	<b>2NF–1</b> Secure fluency in addition and subtraction facts within 10, through continued practice.	
<b>Addition and Subtraction</b>	<b>2AS–1</b> Add and subtract across 10.	
	<b>2AS–2</b> Recognise the subtraction structure of ‘difference’ and answer questions of the form, “How many more...?”.	
	<b>2AS–3</b> Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.	
	<b>2AS–4</b> Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.	
	<b>2MD–1</b> Recognise repeated addition contexts, representing them with multiplication equations and	



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<b>Multiplication and Division</b>	calculating the product, within the 2, 5 and 10 multiplication tables.	
	<b>2MD–2</b> Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division).	
<b>Geometry</b>	<b>2G–1</b> Use precise language to describe the properties of 2D and 3D shapes and compare shapes by reasoning about similarities and differences in properties.	

\*DfE Guidance: 'Teaching mathematics in primary schools June 2020', can be downloaded in full, or per year group, from this page: [www.gov.uk/government/publications/teaching-mathematics-in-primary-schools](http://www.gov.uk/government/publications/teaching-mathematics-in-primary-schools) Summary tables on pages 9-15 (of the full, Years 1-6 document) track criteria across year groups. Within the year group documents, the 'Making connections' blue boxes, detail connections across criteria.

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Year 3 Maths Expectations

End of Year 3 Expectations (taken from NC Mathematics PoS, 2013)	
Number – Number and Place Value	<ul style="list-style-type: none"> <li>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</li> <li>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</li> <li>Compare and order numbers up to 1000</li> <li>Identify, represent and estimate numbers using different representations</li> <li>Read and write numbers up to 1000 in numerals and in words</li> <li>Solve number problems and practical problems involving these ideas.</li> </ul>
Number – Addition and Subtraction	<ul style="list-style-type: none"> <li>Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds</li> <li>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</li> <li>Estimate the answer to a calculation and use inverse operations to check answers</li> <li>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</li> </ul>
Number – Multiplication and Division	<ul style="list-style-type: none"> <li>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> <li>Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods</li> <li>Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects.</li> </ul>
Number - Fractions	<ul style="list-style-type: none"> <li>Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</li> <li>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</li> <li>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</li> <li>Recognise and show, using diagrams, equivalent fractions with small denominators</li> <li>Add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>]</li> <li>Compare and order unit fractions, and fractions with the same denominators ☑ solve problems that involve all of the above.</li> </ul>
Measurement	<ul style="list-style-type: none"> <li>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</li> <li>Measure the perimeter of simple 2-D shapes</li> <li>Add and subtract amounts of money to give change, using both £ and p in practical contexts</li> <li>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</li> <li>Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</li> </ul>





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	<ul style="list-style-type: none"> <li>• Know the number of seconds in a minute and the number of days in each month, year and leap year</li> <li>• Compare durations of events [for example to calculate the time taken by particular events or tasks].</li> </ul>
<b>Geometry – Properties of Shapes, Position and Direction</b>	<ul style="list-style-type: none"> <li>• Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</li> <li>• Recognise angles as a property of shape or a description of a turn</li> <li>• Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle</li> <li>• Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</li> </ul>
<b>Statistics</b>	<ul style="list-style-type: none"> <li>• Interpret and present data using bar charts, pictograms and tables</li> <li>• Solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables</li> </ul>

**Year 3 Maths Assessment Criteria**

Use the \*2020 DfE guidance ready-to-progress criteria, listed in the table below.

	<b>Year 3 ready-to-progress criteria</b>	<b>Evidence / notes</b>
<b>Number and Place Value</b>	<b>3NPV-1</b> Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.	
	<b>3NPV-2</b> Recognise the place value of each digit in three-digit numbers and compose and decompose three-digit numbers using standard and non-standard partitioning.	
	<b>3NPV-3</b> Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.	
	<b>3NPV-4</b> Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.	
<b>Number Facts</b>	<b>3NF-1</b> Secure fluency in addition and subtraction facts that bridge 10, through continued practice.	
	<b>3NF-2</b> Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.	
	<b>3NF-3</b> Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).	



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<b>Addition and Subtraction</b>	3AS–1 Calculate complements to 100.	
	3AS–2 Add and subtract up to three-digit numbers using columnar methods.	
	3AS–3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition and understand the related property for subtraction.	
<b>Multiplication and Division</b>	3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotative and partitive division.	
<b>Fractions</b>	3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.	
	3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency).	
	3F–3 Reason about the location of any fraction within 1 in the linear number system.	
	3F–4 Add and subtract fractions with the same denominator, within 1.	
<b>Geometry</b>	3G–1 Recognise right angles as a property of shape or a description of a turn and identify right angles in 2D shapes presented in different orientations.	
	3G–2 Draw polygons by joining marked points and identify parallel and perpendicular sides.	

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Year 4 Maths Expectations

End of Year 4 Expectations (taken from NC Mathematics PoS, 2013)	
<b>Number – Number and Place Value</b>	<ul style="list-style-type: none"><li>• Count in multiples of 6, 7, 9, 25 and 1000</li><li>• Find 1000 more or less than a given number</li><li>• Count backwards through zero to include negative numbers</li><li>• Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)</li><li>• Order and compare numbers beyond 1000</li><li>• Identify, represent and estimate numbers using different representations</li><li>• Round any number to the nearest 10, 100 or 1000</li><li>• Solve number and practical problems that involve all of the above and with increasingly large positive numbers</li><li>• Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</li></ul>
<b>Number – Addition and Subtraction</b>	<ul style="list-style-type: none"><li>• Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</li><li>• Estimate and use inverse operations to check answers to a calculation</li><li>• Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</li></ul>
<b>Number – Multiplication and Division</b>	<ul style="list-style-type: none"><li>• Recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li><li>• Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers</li><li>• Recognise and use factor pairs and commutativity in mental calculations</li><li>• Multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li><li>• Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as <math>n</math> objects are connected to <math>m</math> objects.</li></ul>
<b>Number – Fractions (including Decimals)</b>	<ul style="list-style-type: none"><li>• Recognise and show, using diagrams, families of common equivalent fractions</li><li>• Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</li><li>• Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number</li><li>• Add and subtract fractions with the same denominator</li><li>• Recognise and write decimal equivalents of any number of tenths or hundredths</li><li>• Recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math></li><li>• Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</li><li>• Round decimals with one decimal place to the nearest whole number</li><li>• Compare numbers with the same number of decimal places up to two decimal places</li><li>• Solve simple measure and money problems involving fractions and decimals to two decimal places.</li></ul>



<b>Measurement</b>	<ul style="list-style-type: none"> <li>• Convert between different units of measure [for example, kilometre to metre; hour to minute]</li> <li>• Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</li> <li>• Find the area of rectilinear shapes by counting squares</li> <li>• Estimate, compare and calculate different measures, including money in pounds and pence</li> <li>• Read, write and convert time between analogue and digital 12- and 24-hour clocks</li> <li>• Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</li> </ul>
<b>Geometry – Properties of Shapes, Position and Direction</b>	<ul style="list-style-type: none"> <li>• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</li> <li>• Identify acute and obtuse angles and compare and order angles up to two right angles by size</li> <li>• Identify lines of symmetry in 2-D shapes presented in different orientations</li> <li>• Complete a simple symmetric figure with respect to a specific line of symmetry.</li> <li>• Describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>• Describe movements between positions as translations of a given unit to the left/right and up/down</li> <li>• Plot specified points and draw sides to complete a given polygon.</li> </ul>
<b>Statistics</b>	<ul style="list-style-type: none"> <li>• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.</li> <li>• Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</li> </ul>

### Year 4 Maths Assessment Criteria

Use the \*2020 DfE guidance ready-to-progress criteria, listed in the table below.

	<b>Year 4 ready-to-progress criteria</b>	<b>Evidence / notes</b>
<b>Number and Place Value</b>	<b>4NPV-1</b> Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.	
	<b>4NPV-2</b> Recognise the place value of each digit in four-digit numbers and compose and decompose four-digit numbers using standard and non-standard partitioning.	
	<b>4NPV-3</b> Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.	



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	<b>4NPV-4</b> Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.	
<b>Number Facts</b>	<b>4NF-1</b> Recall multiplication and division facts up to and recognise products in multiplication tables as multiples of the corresponding number.	
	<b>4NF-2</b> Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.	
	<b>4NF-3</b> Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100).	
<b>Addition and Subtraction</b>	See previous year group.	
<b>Multiplication and Division</b>	<b>4MD-1</b> Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.	
	<b>4MD-2</b> Manipulate multiplication and division equations and understand and apply the commutative property of multiplication.	
	<b>4MD-3</b> Understand and apply the distributive property of multiplication.	
<b>Fractions</b>	<b>4F-1</b> Reason about the location of mixed numbers in the linear number system.	
	<b>4F-2</b> Convert mixed numbers to improper fractions and vice versa.	
	<b>4F-3</b> Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.	
<b>Geometry</b>	<b>4G-1</b> Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.	
	<b>4G-2</b> Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal, and the angles are equal. Find the perimeter of regular and irregular polygons.	
	<b>4G-3</b> Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.	



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Year 5 Maths Expectations

End of Year 5 Expectations (taken from NC Mathematics PoS, 2013)	
Number – Number and Place Value	<ul style="list-style-type: none"> <li>• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li> <li>• Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</li> <li>• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</li> <li>• Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> <li>• Solve number problems and practical problems that involve all of the above</li> <li>• Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>
Number – Addition and Subtraction	<ul style="list-style-type: none"> <li>• Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</li> <li>• Add and subtract numbers mentally with increasingly large numbers</li> <li>• Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>
Number – Multiplication and Division	<ul style="list-style-type: none"> <li>• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>• Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers</li> <li>• Establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</li> <li>• Multiply and divide numbers mentally drawing upon known facts</li> <li>• Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</li> <li>• Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</li> <li>• Recognise and use square numbers and cube numbers, and the notation for squared (<math>^2</math>) and cubed (<math>^3</math>)</li> <li>• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>• Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> <li>• Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> </ul>
Number – Fractions (including Decimals and Percentages)	<ul style="list-style-type: none"> <li>• Compare and order fractions whose denominators are all multiples of the same number</li> <li>• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>• Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math> as a mixed number [for example, <math>2/5 + 4/5 = 6/5 = 1 \frac{1}{5}</math>]</li> </ul>



	<ul style="list-style-type: none"><li>• Add and subtract fractions with the same denominator and denominators that are multiples of the same number</li><li>• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li><li>• Read and write decimal numbers as fractions [for example, <math>0.71 = 71/100</math>]</li><li>• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li><li>• Round decimals with two decimal places to the nearest whole number and to one decimal place</li><li>• Read, write, order and compare numbers with up to three decimal places</li><li>• Solve problems involving number up to three decimal places</li><li>• Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal</li><li>• Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li></ul>
Measurement	<ul style="list-style-type: none"><li>• Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</li><li>• Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</li><li>• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</li><li>• Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (<math>\text{cm}^2</math>) and square metres (<math>\text{m}^2</math>) and estimate the area of irregular shapes</li><li>• Estimate volume [for example, using <math>1 \text{ cm}^3</math> blocks to build cuboids (including cubes)] and capacity [for example, using water]</li><li>• Solve problems involving converting between units of time</li><li>• Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</li></ul>
Geometry – Properties of Shapes, Position and Direction	<ul style="list-style-type: none"><li>• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations</li><li>• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</li><li>• Draw given angles, and measure them in degrees (<math>^\circ</math>)</li><li>• Identify: angles at a point and one whole turn (total <math>360^\circ</math>); angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total <math>180^\circ</math>); and other multiples of <math>90^\circ</math></li><li>• Use the properties of rectangles to deduce related facts and find missing lengths and angles</li><li>• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</li><li>• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.</li></ul>
Statistics	<ul style="list-style-type: none"><li>• Solve comparison, sum and difference problems using information presented in a line graph</li><li>• Complete, read and interpret information in tables, including timetables.</li></ul>





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Year 5 Maths Assessment Criteria

Use the \*2020 DfE guidance ready-to-progress criteria, listed in the table below.

	Year 5 ready-to-progress criteria	Evidence / notes
<b>Number and Place Value</b>	<b>5NPV-1</b> Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	
	<b>5NPV-2</b> Recognise the place value of each digit in numbers with up to 2 decimal places and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.	
	<b>5NPV-3</b> Reason about the location of any number with up to 2 decimal places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.	
	<b>5NPV-4</b> Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	
	<b>5NPV-5</b> Convert between units of measure, including using common decimals and fractions.	
<b>Number Facts</b>	<b>5NF-1</b> Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	
	<b>5NF-2</b> Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).	
<b>Multiplication and Division</b>	<b>5MD-1</b> Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.	
	<b>5MD-2</b> Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.	
	<b>5MD-3</b> Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	



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<b>Fractions</b>	5MD-4 Divide a number with up to 4 digits by a one-digit number using a formal written method and interpret remainders appropriately for the context.	
	5F-1 Find non-unit fractions of quantities.	
	5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	
	5F-3 Recall decimal fraction equivalents for $\frac{1}{2}$ , $\frac{1}{4}$ , and $\frac{3}{4}$ and for multiples of these proper fractions.	
<b>Geometry</b>	5G-1 Compare angles, estimate, and measure angles in degrees ( $^{\circ}$ ) and draw angles of a given size.	
	5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units.	

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Year 6 Maths Expectations

End of Year 6 Expectations (taken from NC Mathematics PoS, 2013)	
<b>Number – Number and Place Value</b>	<ul style="list-style-type: none"> <li>• Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</li> <li>• Round any whole number to a required degree of accuracy</li> <li>• Use negative numbers in context, and calculate intervals across zero</li> <li>• Solve number and practical problems that involve all of the above.</li> </ul>
<b>Number – Addition, Subtraction, Multiplication and Division</b>	<ul style="list-style-type: none"> <li>• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>• Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</li> <li>• Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context</li> <li>• Perform mental calculations, including with mixed operations and large numbers</li> <li>• Identify common factors, common multiples and prime numbers</li> <li>• Use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>• Solve problems involving addition, subtraction, multiplication and division</li> <li>• Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</li> </ul>
<b>Number – Fractions (including Decimals and Percentages)</b>	<ul style="list-style-type: none"> <li>• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>• Compare and order fractions, including fractions <math>&gt; 1</math></li> <li>• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>• Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>]</li> <li>• Divide proper fractions by whole numbers [for example, <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>]</li> <li>• Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, <math>\frac{3}{8}</math>]</li> <li>• Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places</li> <li>• Multiply one-digit numbers with up to two decimal places by whole numbers</li> <li>• Use written division methods in cases where the answer has up to two decimal places</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy</li> <li>• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li> </ul>
<b>Ratio and Proportion</b>	<ul style="list-style-type: none"> <li>• Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</li> <li>• Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison</li> </ul>



	<ul style="list-style-type: none"> <li>Solve problems involving similar shapes where the scale factor is known or can be found</li> <li>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</li> </ul>
Algebra	<ul style="list-style-type: none"> <li>Use simple formulae</li> <li>Generate and describe linear number sequences</li> <li>Express missing number problems algebraically</li> <li>Find pairs of numbers that satisfy an equation with two unknowns</li> <li>Enumerate possibilities of combinations of two variables.</li> </ul>
Measurement	<ul style="list-style-type: none"> <li>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</li> <li>Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places</li> <li>Convert between miles and kilometres</li> <li>Recognise that shapes with the same areas can have different perimeters and vice versa</li> <li>Recognise when it is possible to use formulae for area and volume of shapes</li> <li>Calculate the area of parallelograms and triangles</li> <li>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units [for example, mm<sup>3</sup> and km<sup>3</sup>].</li> </ul>
Geometry – Properties of Shapes, Position and Direction	<ul style="list-style-type: none"> <li>Draw 2-D shapes using given dimensions and angles</li> <li>Recognise, describe and build simple 3-D shapes, including making nets</li> <li>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</li> <li>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> <li>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li> <li>Describe positions on the full coordinate grid (all four quadrants)</li> <li>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</li> </ul>
Statistics	<ul style="list-style-type: none"> <li>Interpret and construct pie charts and line graphs and use these to solve problems</li> <li>Calculate and interpret the mean as an average.</li> </ul>

Year 6 Maths Assessment Criteria

Use the \*2020 DfE guidance ready-to-progress criteria, listed in the table below.

Year 6 ready-to-progress criteria	Evidence / notes
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**QUEENSMEAD PRIMARY ACADEMY**  
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<b>Number and Place Value</b>	<b>6NPV-1</b> Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).	
	<b>6NPV-2</b> Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.	
	<b>6NPV-3</b> Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.	
	<b>6NPV-4</b> Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.	
<b>Number Facts</b>	<b>See previous year-groups.</b>	
<b>Addition, Subtraction, Multiplication &amp; Division</b>	<b>6AS/MD-1</b> Understand that 2 numbers can be related additively or multiplicatively and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).	
	<b>6AS/MD-2</b> Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.	
	<b>6AS/MD-3</b> Solve problems involving ratio relationships.	
	<b>6AS/MD-4</b> Solve problems with 2 unknowns.	
<b>Fractions</b>	<b>6F-1</b> Recognise when fractions can be simplified and use common factors to simplify fractions.	
	<b>6F-2</b> Express fractions in a common denomination and use this to compare fractions that are similar in value.	
	<b>6F-3</b> Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and	



**QUEENSMEAD PRIMARY ACADEMY**  
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<b>Geometry</b>	common denomination as a comparison strategy.	
<b>Geometry</b>	<b>6G-1</b> Draw, compose, and decompose shapes according to given properties, including dimensions, angles, and area, and solve related problems.	

\*DfE Guidance: 'Teaching mathematics in primary schools June 2020', can be downloaded in full, or per year group, from this page: [www.gov.uk/government/publications/teaching-mathematics-in-primary-schools](http://www.gov.uk/government/publications/teaching-mathematics-in-primary-schools) Summary tables on pages 9-15 (of the full, Years 1-6 document) track criteria across year groups. Within the year group documents, the 'Making connections' blue boxes, detail connections across criteria.

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
TA						
Academy Moderation						
Trust Moderation						

**Appendix B - QPA Mathematics Yearly Overviews:**



## Y1 Maths Yearly Overview 2024-25

	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Autumn	<b>Number: Place Value (within 10)</b> (1NPV-1; 1NPV-2 within 10)						<b>Number: Addition &amp; Subtraction (within 10)</b>		<b>Number: Addition &amp; Subtraction (within 10)</b> (1NF-1; 1AS-1; 1AS-2)			<b>Geometry: Shape (1G-1; 1G-2)</b>		<b>Number: Place Value (within 20)</b> (1NPV-1; 1NPV-2)		
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Spring	<b>Number: Addition &amp; Subtraction (within 20)</b> (1NPV-2; 1AS-1; 1AS-2)						<b>Number: Place Value (within 50)</b> (1NPV-1; 1NPV-2; 1NF-2)		<b>Measurement: Length, Height, Weight &amp; Volume</b> (Link to 1NPV-2, 1AS-1 & 1AS-2)				<b>Number: Multiplication &amp; Division (1NF-2)</b>			
	Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Summer	<b>Number: Fractions</b> (Link to 1G-1)			<b>Measurement: Time</b> (Link to 1NPV-2)		<b>Number: Place Value (within 100)</b> (1NPV-1; 1NPV-2) & PiXL Assessments			<b>Measurement: Money</b> (Link to 1NF-2, 1NPV-1)		<b>Geometry: Position and direction</b>					
	Wk1	Wk2 (4 days)	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10 (4 days)	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)





## Y2 Maths Yearly Overview 2024-25



	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Autumn	Number: Place Value (2NPV-1; 2NPV-2)			Number: Addition & Subtraction (2NF-1; 2AS-1; 2AS-3; 2AS-4)				Number: Addition & Subtraction (cont.)		Number: Multiplication & Division (2MD-1; 2MD-2)						
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Spring	Geometry: Properties of Shape (2G-1)		Number: Place Value	Number: Addition & Subtraction (2NF-1; 2AS-1; 2AS-3; 2AS-4)		Measurement: Money		Measurement: Money (cont.) (2NPV-2; 2AS-2; 2AS-4) & PiXL Assessments		Number: Fractions (2MD-2)		Time (2MD-1)				
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Summer	Wk1	Wk2 (4 days)		Wk3	Wk4		Wk5		Wk6	Wk7	Wk8	Wk9	Wk10 (4 days)			
	Consolidation (based on AfL)					Geometry: Position & Direction		KS1 SATS			Measurement: Mass, Capacity & Temperature (2MD-1) Length & Height (2AS-4)		Statistics (2MD-1)			



## Y3 Maths Yearly Overview 2024-25

	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)	
Autumn	<b>Number: Place Value</b> (3NPV-1; 3NPV-2; 3NPV-3; 3NPV-4)						<b>Number: Addition &amp; Subtraction</b> (3NF-1; 3AS-1; 3AS-2; 3AS-3) & PiXL Assessments		<b>Number: Addition &amp; Subtraction</b> (3NF-1; 3AS-1; 3AS-2; 3AS-3)					<b>Number: Multiplication &amp; Division</b> (3NF-2; 3MD-1)			
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	PiXL Assessments		Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13		
Spring	<b>Number: Multiplication &amp; Division</b> (3NF-2; 3NF-3; 3MD-1)						PiXL Assessments		<b>Measurement: Length &amp; Perimeter</b> (3NPV-1; 3NPV-3; 3NPV-4; 3NF-1; 3NF-3)			<b>Number: Fractions</b> (3F-1; 3F-2)					
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	PiXL Assessments		Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13		
Summer	Wk1	Wk2 (4 days)	Wk3	Wk4	Geometry: Properties of Shape (3G-1; 3G-2)		Measurement: Money (3NPV-1; 3AS-3) & PiXL Assessments		Wk5	Wk6	Wk7	Wk8	Wk9	Wk10 (4 days)	Statistics (3NPV-4)		
	<b>Measurement: Time</b> (3NF-3)				Geometry: Properties of Shape (3G-1; 3G-2)		Measurement: Money (3NPV-1; 3AS-3) & PiXL Assessments		Wk5	Wk6	Wk7	Wk8	Wk9	Wk10 (4 days)	Statistics (3NPV-4)		



## Y4 Maths Yearly Overview 2024-25

	Wk1 (4days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Autumn	<b>Number: Place Value</b> (4NPV-1; 4NPV-2; 4NPV-3; 4NPV-4)				<b>Number: Addition &amp; Subtraction</b> (4NF-3) <b>(3AS-2; 3AS-3)</b> <i>Link to Money</i> <b>&amp; PiXL Assessments</b>				<b>Measurement: Length, Perimeter &amp; Area</b> (4NF-1; 4G-2)			<b>Number: Multiplication &amp; Division</b> (4NPV-1; 4NF-1; 4NF-2; 4NF-3; 4MD-2; 4MD-3)			<b>Number: Fractions</b> (4F1)	
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Spring	<b>Number: Multiplication &amp; Division</b> (4NPV-1; 4NF-1; 4NF-2; 4NF-3; 4MD-1; 4MD-2; 4MD-3)				<b>Number: Fractions (4F-2; 4F-3) &amp; PiXL Assessments</b>				<b>Number: Fractions (cont.)</b>			<b>Number: Decimals</b> (4MD-1; 4NF-3)				
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Summer	<b>Statistics</b> (4NPV-4) <b>(3NPV-4)</b>		<b>Number: Multiplication MTC Prep., based on AfL</b>				<b>Geometry: Properties of Shape</b> (4G-2; 4G-3) <b>(3G-1)</b> <b>Y4 MTC &amp; PiXL Assessments</b>			<b>Measurement: Time</b> (4NF-3)			<b>Geometry: Position &amp; Direction</b> (4G-1)			
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10 (4 days)	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)



## Y5 Maths Yearly Overview 2024-25

	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
Autumn	<b>Number: Place Value</b> (5NPV-1; 5NPV-2; 5NPV-3; 5NPV-4)				<b>Number: Addition &amp; Subtraction</b> <b>(3AS-2)</b>  & PiXL Assessments				<b>Number: Multiplication &amp; Division</b> (5NF-1; 5NF-2; 5MD-1; 5MD-2)			<b>Number: Fractions</b> (5F-1; 5F-2; 5F-3)			<b>Geometry: Symmetry (4G-3)</b>	
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13			
Spring	<b>Number: Multiplication &amp; Division</b> (5NF-1; 5NF-2; 5MD-1; 5MD-3; 5MD-4)			<b>Number: Fractions</b> (5F-1; 5F-2; 5F-3)		<b>PiXL Assessments</b>		<b>Number: Decimals &amp; Percentages</b> (5NF-2; 5MD-1) (5NPV-1; 5NPV-2; 5NPV-3; 5NPV-5; 5NF-2; 5F-3)			<b>Number: Decimals</b> (5NPV-1; 5NPV-2; 5NPV-3; 5NF-2; 5MD-1)		<b>Number: Negative Numbers</b>		<b>Statistics</b> (5NPV-4)	
	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5			Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12		Wk13
Summer	Wk1	Wk2 (4 days)		Wk3	Wk4		Wk5	Wk6		Wk7	Wk9	Wk10 (4 days)				
	<b>Geometry: Properties of Shape</b> (5G-1) <b>(3G-1; 3G-2; 4G-2)</b> (based on AFL)			<b>Measurement: Perimeter &amp; Area</b> (5G-2)			<b>Measurement: Converting Units</b> (5NPV-5; 5MD-1) <b>(4MD-1)</b> & PiXL Assessments			<b>Geometry: Position &amp; Direction</b> <b>(3G-1; 4G-1)</b>			<b>Measurement: Volume</b> (5NPV-5)			



## Y6 Maths Yearly Overview 2024-25

	Wk1 (4 days)	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16 (4 days)
<b>Autumn</b>	<b>Number: Place Value</b> (6NPV-1; 6NPV-2; 6NPV-3; 6NPV-4)		<b>Number: Addition, Subtraction, Multiplication &amp; Division</b> (6AS/MD-1; 6AS/MD-2) & PiXL Assessments			<b>Number: Percentages (5NF-2)</b>	<b>Number: Fractions</b> (6F-1; 6F-2; 6F-3)		<b>Number: Fractions</b> (cont.)		<b>Measurement: Converting Units</b> (6NPV-1)	<b>Geometry: Position &amp; Direction</b> (6G-1) (4G-1) & PiXL Assessments		<b>Number: Fractions, Decimals &amp; Percentages</b> (6F-1; 6F-2; 6F-3)		
<b>Spring</b>	Wk1 (4 days)	Wk2	Wk3	Wk4		Wk5		Wk6	Wk7	Wk8	Wk9		Wk10	Wk11	Wk12	Wk13
	<b>Number: Ratio &amp; Algebra</b> (6AS/MD-3; 6AS/MD-4) & PiXL Assessments		<b>Measurement: Perimeter, Area &amp; Volume</b> (6G-1)					<b>Statistics</b> (6NPV-4) (5NPV-4)	<b>Geometry: Shape (Angles)</b> (6G-1) (5G-1)			MOCK SATs Week	<b>Number: Decimals /Consolidation</b> (6NPV-1; 6NPV-2) (5F-3; 5NPV-5)			
<b>Summer</b>	Wk1		Wk2 (4 days)		Wk3		Wk4		Wk5	Wk6	Wk7	Wk8	Wk9	Wk10 (4 days)		
	<b>Consolidation / SATS Preparation</b>				<b>KS2 SATS</b>		Investigations		<b>Consolidation / Transition</b>							