



Chadsgrove Curriculum Long Term Planning: Pioneers Pathway - Mathematics

Curriculum Intent

At Chadsgrove School, the teaching of Mathematics is carefully tailored to meet the diverse needs and abilities of our pupils. A personalised approach is at the heart of our Maths provision, ensuring that each pupil can access meaningful and relevant mathematical experiences. Teaching is structured around the principle of sequential skill development, recognising the importance of building firm foundations in key mathematical concepts before moving on to more complex and interconnected skills.

Maths is delivered through a range of approaches that reflect pupils' individual learning styles and needs, whether they are working on early number concepts or exploring more formal mathematical operations. As pupils move through the school, progression in Maths is supported by strong communication between Teachers, with informal transitional arrangements ensuring continuity and appropriate challenge for every pupil.

Planning, learning and assessment for pupils on the Pioneers Pathway is guided by the National Curriculum. It is designed to ensure that all learners become fluent in the fundamentals of Mathematics and develop conceptual understanding, are able to reason mathematically and explain their thinking using mathematical language. Pupils are encouraged to solve problems by applying their Mathematics to relevant real life situations and persevere in seeking solutions as well as following a sequential curriculum that builds on past learning, avoiding gaps and promoting continuity and progression. Older pupils will have the opportunity to work towards externally accredited qualifications, from Entry Level 1 to Level 2 as appropriate.

Curriculum Implementation

Pupil progression in Maths is supported through a Concrete, Representation then Abstract (CRA) approach to each area. The Concrete Stage is using physical objects for example blocks, or actual objects which can be handled or manipulated, to support sensory approaches to learning. As pupils progress, they move towards representations of objects such as shapes on a page or pictorial representations of objects. In the abstract stage, pupils are taught how to translate two-dimensional drawings into the conventional mathematics notation to solve problems.

Teaching takes into account personal learning styles whilst also empowering pupils to draw on a wide range of calculation strategies, explaining methods and reasoning and establishing a secure foundation in mental calculation and the recall of number facts before standard written methods are introduced.

Pupils are enabled to extend their reasoning, problem solving and investigational skills and assisted to make predictions, judge whether their answers are reasonable and have strategies to check.

Pupils are encouraged to develop life skills for living, employment and recreation. This includes, but not exclusively, money, time and measure.

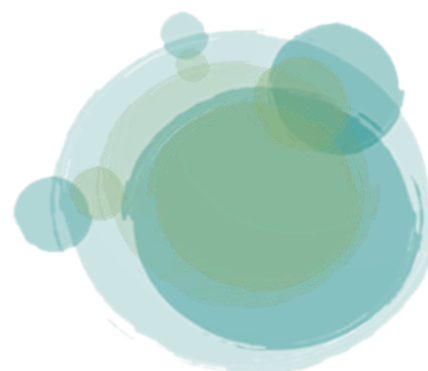
The table below contains content from the programmes of study from the National Curriculum for Maths in Key Stages 1 and 2 for pupils in Pioneers 1 and 2. These will be adapted in teachers' Medium Term Plans to reflect the learning needs of the pupils in their class.

Pupils in Pioneers 3 follow the subject content for Entry Level Functional Skills qualifications. The transition from Pioneers 2 to Pioneers 3 reflects a shift from developing mathematical concepts through the National Curriculum to applying mathematical knowledge in practical, real-life contexts through Functional Skills Mathematics. In Pioneers 2, pupils build increasingly sophisticated understanding across number, calculation, fractions, measurement, geometry and statistics. In Pioneers 3, these skills are revisited and consolidated through functional and vocationally relevant activities, enabling pupils to use mathematics independently in everyday situations.

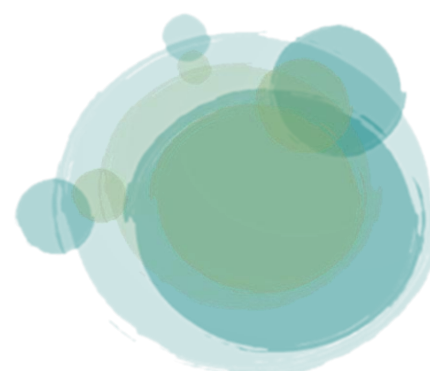
This progression supports pupils to move from acquiring mathematical knowledge to applying it confidently when solving problems, managing money, interpreting information, using measurements and making informed decisions. The emphasis in Pioneers 3 is therefore on fluency, independence and preparation for adulthood, ensuring pupils develop the practical mathematical skills required for future learning, employment and everyday life.

Pioneers 1

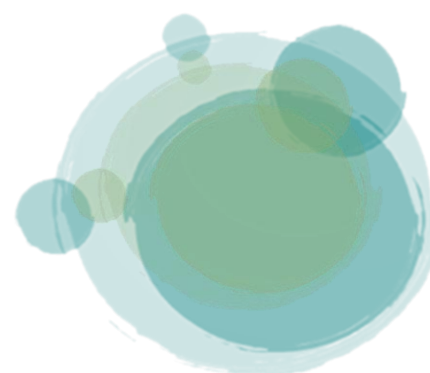
<u>Term</u>	<u>Autumn 2026</u>	<u>Spring 2027</u>	<u>Summer 2027</u>
Number	Place value • count forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers in numerals; count in multiples of twos, fives and tens • given a number, identify one more and one less Addition and subtraction • read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs • represent and use number bonds and related subtraction facts	Multiplication and division • 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 Fractions • recognise, find and name a half as one of two equal parts of an object, shape or quantity • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	Place value • recognise the place value of each digit • compare and order numbers, use <, > and = signs
Measurement	• tell the time and draw the hands on a clock face to show times	• compare, describe and solve practical problems for lengths and heights, mass/weight, capacity and volume and time	• recognise and know the value of different denominations of coins and notes
Geometry/ Statistics	Properties of shapes • recognise and name common 2-D shapes	Properties of shapes • recognise and name common 3-D shapes	Statistics • interpret and construct simple pictograms, tally charts, block diagrams and simple tables



<u>Term</u>	<u>Autumn 2027</u>	<u>Spring 2028</u>	<u>Summer 2028</u>
Number	Place value - count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward - read and write numbers in numerals and in words	Addition and subtraction - recall and use addition and subtraction facts fluently, and derive and use related facts - add and subtract numbers using concrete objects, pictorial representations and mentally	Multiplication and division - recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables - calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals (=) signs Fractions - recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
Measurement	choose and use appropriate standard units to estimate and measure length/height and mass	tell and write the time to five minutes, including quarter past/to the hour	choose and use appropriate standard units to estimate temperature and capacity
Geometry/ Statistics	Properties of shapes recognise and name common 2-D shapes	Properties of shapes recognise and name common 3-D shapes	Position and direction - describe position, direction and movement, including whole, half, quarter and three-quarter turns - order and arrange combinations of mathematical objects in patterns and sequences

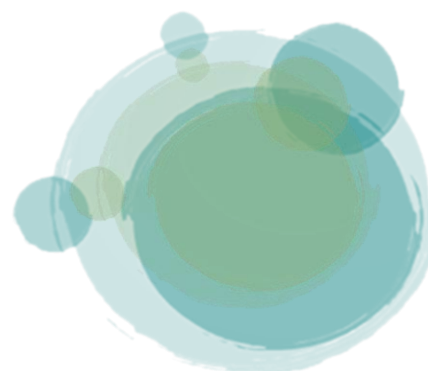


<u>Term</u>	<u>Autumn 2028</u>	<u>Spring 2029</u>	<u>Summer 2029</u>
Number	Place value • identify, represent and estimate numbers using different representations, including the number line • use place value and number facts to solve problems Addition and subtraction • show that addition of two numbers can be done in any order (commutative) and subtraction cannot • recognise and use the inverse relationship between addition and subtraction	Multiplication and division • show that multiplication of two numbers can be done in any order (commutative) and division cannot • solve problems involving multiplication and division using materials, arrays, repeated addition and mental methods	Fractions • write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$
Measurement	• compare, describe and solve practical problems for lengths and heights and mass/weight,	• recognise and know the value of different denominations of coins and notes	• compare, describe and solve practical problems for capacity and volume and time
Geometry/ Statistics	Properties of shapes • identify and describe the properties of 2-D shapes	Statistics • ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • ask and answer questions about totalling and comparing categorical data	Properties of shapes • identify and describe the properties of 3-D shapes

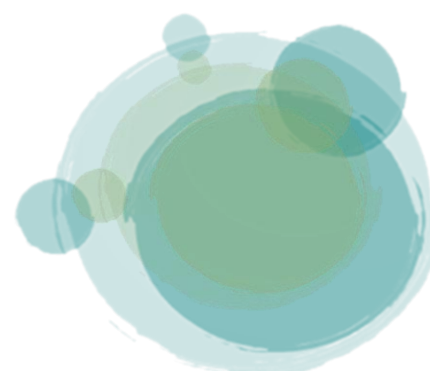


<u>Term</u>	<u>Autumn 2026</u>	<u>Spring 2027</u>	<u>Summer 2027</u>
Number	Place Value • count from 0 in multiples of 4, 8, 50 and 100 • find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers • identify, represent and estimate numbers using different representations • read and write numbers in numerals and in words • solve number problems and practical problems involving these ideas	Addition and Subtraction • add and subtract numbers mentally including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds • add and subtract numbers with more than 4 digits using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers • solve problems including missing number problems	Multiplication and Division • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know • solve problems including missing number problems involving multiplication and division Fractions • count up and down in tenths • recognise that tenths arise from dividing an object into 10 equal parts • recognise and use fractions as numbers • recognise and show using diagrams equivalent fractions • add and subtract fractions with the same denominator within one whole • know percentages and decimal equivalents
Measurement	• add and subtract amounts of money to give change, using both £ and p in practical contexts	• measure, compare, add and subtract lengths (m/cm/mm) • measure the perimeter of simple 2-D shapes	• tell and write the time from an analogue clock including using Roman numerals • estimate and read time with increasing accuracy • record and compare time in seconds, minutes and hours
Geometry/ Statistics	Properties of Shape • draw 2-D shapes and make 3-D shapes using modelling materials • recognise 3-D shapes in different orientations and describe them • identify lines of symmetry in 2-D shapes presented in different orientations	Position and Direction • describe positions on a 2-D grid as coordinates in the first quadrant • describe movements	Statistics • interpret and present data using bar charts, pictograms and tables • solve one-step and two-step questions using information presented in scaled bar charts and pictograms between positions as translations

<u>Term</u>	<u>Autumn 2027</u>	<u>Spring 2028</u>	<u>Summer 2028</u>
Number	Place Value • read, write, order and compare numbers • determine the value of each digit • count forwards or backwards in steps • interpret negative numbers in context • round any number to the nearest whole number Addition and Subtraction • add and subtract whole numbers with more than 4 digits using formal written methods • add and subtract numbers mentally with increasingly large numbers • solve addition and subtraction multi-step problems in contexts	Multiplication and Division • identify multiples and factors • establish whether a number up to 100 is prime • multiply numbers up to 4 digits using a formal written method • multiply and divide numbers mentally drawing upon known facts	Fractions (including decimals) • compare and order fractions whose denominators are multiples of the same number • recognise mixed numbers and improper fractions • add and subtract fractions with the same denominator
Measurement	• solve problems involving converting between units of time	• measure and calculate the perimeter of composite rectilinear shapes	• convert between different units of metric measure • understand and use approximate equivalences between metric units and common imperial units
Geometry/ Statistics	Properties of Shape • identify 3-D shapes including cubes and other cuboids from 2-D representations	Position and Direction • identify, describe and represent the position of a shape following a reflection or translation	Statistics • solve comparison, sum and difference problems using information presented in line graphs • complete, read and interpret information in tables



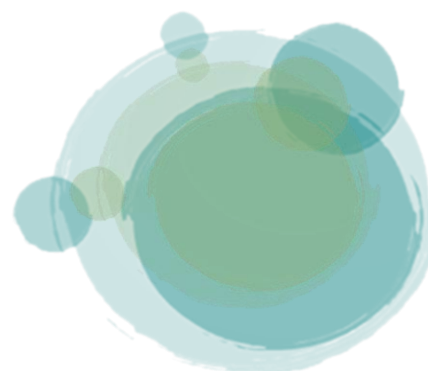
<u>Term</u>	<u>Autumn 2028</u>	<u>Spring 2029</u>	<u>Summer 2029</u>
Number	Place Value • read, write, order and compare numbers • determine the value of each digit • round any whole number to a required degree of accuracy Addition, Subtraction, Multiplication and Division • perform mental calculations including with mixed operations and large numbers • use formal written methods for all four operations • use estimation to check answers to calculations	Fractions, Decimals and Percentages • use common factors to simplify fractions • compare and order fractions • add and subtract fractions with different denominators • multiply simple pairs of proper fractions • associate a fraction with division grouping Algebra • use simple formulae • generate and describe linear number sequences	Ratio and Proportion • solve problems involving the relative sizes of two quantities • solve problems involving unequal sharing
Measurement	• solve problems involving the calculation and conversion of units of measure	• calculate the area of parallelograms and triangles • calculate, estimate and compare volume of cubes and cuboids	• estimate, compare and calculate different measures, including money in pounds and pence
Geometry/Statistics	Properties of Shape • draw 2-D shapes using given dimensions and angles • draw given angles, and measure them in degrees • recognise, describe and build simple 3-D shapes •	Position and Direction • describe positions on the full coordinate grid • draw and translate simple shapes on the coordinate plane	Statistics • interpret and construct pie charts and line graphs • calculate and interpret the mean as an average



Pioneers 3

Functional Skills Maths

Autumn	Spring	Summer
Using numbers and the number system – whole numbers, fractions and decimals	Using common measures, shape and space Handling information and data Sample Assessment Walkthrough of Sample Assessment Targeted Revision	Consolidation & Revision Live Assessment Consolidation Live Assessment (Re-sits) Consolidation



Curriculum Impact

In Pioneers 1 and 2, Chadsgrove P Steps are used to measure pupils' progress in Maths. Assessment and progress is monitored through ongoing formative assessment. Evidence of learning and progress can be found in pupils' work folders. These include teacher marking and annotations, annotated photographs of pupils engaged in activities where appropriate and Assessment Trackers showing progress towards individual targets. Pupils are also encouraged to reflect on their own learning and, where appropriate, use RAG-rated self-evaluation to consider their progress and achievements.

Pupils' progress towards their P Steps is recorded using our digital assessment system, SOLAR, which breaks learning into small developmental steps and allows staff to track pupil progress over time. Assessment information is reviewed regularly and recorded termly on the whole school tracking system to ensure progress is monitored and appropriate support or interventions can be implemented where needed.

Pupils work towards individual targets linked to their EHCP outcomes. These targets are incorporated into teachers' Medium Term Plans and reviewed regularly to ensure continued development of knowledge, understanding and skills.

Pupils in Pioneers 3 focus on developing the core mathematical skills required for success in Functional Skills Mathematics. Progress is assessed on an ongoing basis against the assessment criteria of the Functional Skills Mathematics qualification, enabling staff to evaluate pupils' readiness and determine when pupils will undertake their Functional Skills examination.

Through the curriculum as a whole, pupils develop subject knowledge and skills alongside communication, independence and methods of recording their learning, including handwriting, typing or the use of AAC where appropriate. Learning experiences aim to be engaging, practical and accessible so that pupils can apply their understanding, communicate their ideas and build foundations for future learning both within school and beyond.

