Primary National Curriculum Alignment for England

Mathletics and the Primary England National Curriculum 2014

This alignment document lists all Mathletics curriculum activities, eBooks and Live Mathletics levels associated with each 'England 2014 NC' course, and demonstrates how these fit within the Early Years Foundation Stage and the England National Curriculum programmes of study.

As new activities are developed, this document will be updated. You can download the latest version from the training and support portal:

www.3plearning.com/training

Contents

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The Early Years Foundation Stage

Overarching principles:

- "Every child is a **unique child**, who is constantly learning and can be resilient, capable, confident and self-assured.
- Children learning to be strong and independent through **positive relationships**.
- Children learn and develop well in **enabling environments**, in which their experiences respond to their individual needs and there is a strong partnership between practitioners and parents and/or carers.
- **Children develop and learn in different ways and at different rates**. The framework covers the education and care of all children in early years provision, including children with special educational needs and disabilities."

Mathletics provides a nurturing, secure and fun learning environment for children to embark on mathematics learning. Children explore Mathletics activities and games at their own pace, gaining recognition for their achievements as they progress.

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The Primary Curriculum

The national curriculum for mathematics aims to ensure that all pupils:

- "**Become fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that all pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately."

  Curriculum activities and Live Mathletics develop fluency in recalling and applying mathematical knowledge through practice with increasingly harder activities. The student support centre and features such as the concept search help to develop conceptual understanding through interactive explanations and walk-throughs.

- "**Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language."

  Reasoning activities are provided through Mathletics curriculum activities and eBooks which encourage children to explore relationships and develop arguments and justifications.

- "Can **solve problems** by applying their mathematics to a variety of routine and onon-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions."

  Pupils develop problem-solving skills and demonstrate depth of mathematical knowledge through problem-solving activities and games in curriculum activities, eBooks and the 'Problem-solving Centre'.

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Reception

The Early Years Foundation Stage statutory framework states:

"Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtract problems; and to describe shapes, spaces and measures."

Expectation	Topic	Activity
Number		
ELGNu1 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.	Numbers to 10	Count to 5
		Order numbers to 10
		Concept of Zero
		Matching Numbers to 10
		Dot Display
		How Many?
		More or Less?
		How Many Dots?
		More, Less or the same to 10
		Ordinal Numbers
	Numbers to 20	Counting Up to 20
		Order numbers to 20
		Counting Back Within 20
		Before, After and Between to 20
		Making Teen Numbers
		Make Numbers Count
		More, Less or the same to 20
ELGNu2 Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.	Operations with Numbers	Adding to 5
		Subtracting from 5
		Model Addition
		Model Subtraction
		Adding to Ten
		Subtracting from Ten
		Balance Numbers to 10
		All About Ten
		Adding to Make 5 and 10
		Adding to 10 Word Problems
ELGNu3 They solve problems, including doubling, halving and sharing.	Operations with Numbers	Balance Numbers to 10
		Adding to 10 Word Problems
		Share the Treasure
		Doubles and Halves to 10

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Reception

Expectation	Topic	Activity
Shape, Space and Measure		
ELGSSM1 Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.	Measurement	Days of the Week
		Balancing Act
		Filling Fast!
		Hot or Cold?
		Everyday Mass
		How Full?
		Which Holds More?
		Everyday Length
		Comparing Length
	Statistics	Who has the Goods?
		Same and Different
		Sort It
ELGSSM2 They recognise, create and describe patterns.	Patterns and Problem Solving	Complete the Pattern
		Simple Patterns
		Colour Patterns
		Missing It!
ELGSSM3 They explore characteristics of everyday objects and shapes and use mathematical language to describe them.	Shape and Space	Collect the Shapes
		Where is it?
		Match the Object
		Collect Simple Shapes

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KS1: Years 1 & 2

The national curriculum states:

"The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]."

Year 1

Expectation	Topic	Activity
Number: Addition and Subtraction		
1C1 Represent and use number bonds and related subtraction facts within 20.	Add and Subtract	Adding to Make 5 and 10
		Balance Numbers to 10
		Subtracting from Ten
		Adding to 10 Word Problems
		Addition Facts
		Subtraction Facts to 18
		Balance Numbers to 20
		All about Twenty
		Add and Subtract Problems
1C2a Add and subtract one-digit and two-digit numbers to 20, including zero.	Add and Subtract	Adding to Make 5 and 10
		Balance Numbers to 10
		Subtracting from Ten
		Adding to 10 Word Problems
		Addition Facts
		Addictive Addition
		Addition
		Simple Subtraction
		Subtraction Facts to 18
		Balance Numbers to 20
		All about Twenty
		Add and Subtract Problems

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Year 1

Expectation	Topic	Activity
Number: Addition and Subtraction (Continued)		
1C2b Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	Add and Subtract	Addictive Addition
		Addition Facts
		All about Twenty
		Addition
		Adding to 10 Word Problems
		Subtracting from Ten
		Subtraction Facts to 18
		Simple Subtraction
		Subtract Tens
		Balance Numbers to 10
		Balance Numbers to 20
1C4 Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 =_ - 9.	Add and Subtract	Balance Numbers to 10
		Balance Numbers to 20
		Add and Subtract Word Problems
	Multiply and Divide	Groups of Two
		Groups of Five
		Groups of Ten
Number : Multiplication and Division		
1C8 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.	Multiply and Divide	Groups
		Groups of Two
		Groups of Five
		Groups of Ten
		Model Multiplication to 5 x 5
		Multiplication Arrays
		Share the Treasure
Number : Fractions		
1F1a Recognise, find and name a half as one of two equal parts of an object, shape or quantity.	Fractions	Is it Half?
		Halves and Quarters
		Doubles and Halves to 10
		Doubles and Halves to 20
1F1b Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	Fractions	Halves and Quarters

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Year 1

Expectation	Topic	Activity
Measurement		
1M1 Compare, describe and solve practical problems for: lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half); mass or weight (e.g. heavy/light, heavier than, lighter than); capacity/volume (full/empty, more than, less than, quarter); and time (quicker, slower, earlier, later)	Measurement	Which Holds More?
		Everyday Mass
		Filling Fast!
		Everyday Length
		Comparing Length
		Measuring Length with Blocks
		Comparing Volume
		Which Measuring Tool?
		How Full?
	Statistics	Same and Different
		Sort It
1M2 Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; and time (hours, minutes, seconds).	Measurement	Everyday Mass
		Everyday Length
	Time and Money	Hour Times
		Half Hour Times
1M3 Recognise and know the value of different denominations of coins and notes.	Time and Money	Everyday Money (GBP)
1M4a Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	Time and Money	Hour Times
		Half Hour Times
1M4b Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.	Time and Money	Days of the Week
1M4c Recognise and use language relating to dates, including days of the week, weeks, months and years.	Time and Money	Days of the Week
		Months of the Year
Geometry: Properties of Shapes		
1G1a Recognise and name common 2-D shapes [e.g. rectangles (including squares), circles and triangles].	Properties of Shapes and Position	Collect Simple Shapes
		Count Sides and Corners
1G1b Recognise and name common 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].	Properties of Shapes and Position	Collect the Objects 1
		Match the Solid 1
		How Many Faces?
Geometry: Position and Direction		
1P2 Describe position, directions and movements, including half, quarter and three-quarter turns.	Properties of Shapes and Position	Flip, Slide, Turn
		Where is it?
		Left or Right

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Year 2

Expectation	Topic	Activity
Number: Place Value		
2N1 Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward.	Number and Place Value (1)	Counting by Twos
		Counting by Fives
		Counting by Tens
		Count by 2s, 5s, 10s
		Skip Counting
		10 more, 10 less
		Count Forward Patterns
		Count Backward Patterns
2N2a Read and write numbers to at least 100 in numerals and in words	Number and Place Value (1)	Going Up
		Going Down
		1 to 30
2N2b Compare and order numbers from 0 up to 100; use <, > and = signs	Number and Place Value (2)	Before, After & Between to 100
		Compare Numbers to 100
		Arranging Numbers
		Number Line Order
2N3 Recognise the place value of each digit in a two-digit number (tens, ones).	Number and Place Value (1)	Make Big Numbers Count
		Making Big Numbers Count
		Place Value 1
		Repartition Two-Digit Numbers
		Arranging Numbers
		Number Line Order
2N4 Identify, represent and estimate numbers using different representations, including the number line.	Number and Place Value Counting	Counting on a 100 Grid
		Skip Counting
	Number and Place (1)	Make Big Numbers Count
		Making Big Numbers Count
		Number Line Order
		Place Value 1
		Repartition Two-Digit Numbers
2N6 Use place value and number facts to solve problems.	Number and Place Value Counting	Count Forward Patterns
		Count Backward Patterns
	Number and Place Vaue (1)	Place Value 1
		Repartition Two-Digit Numbers
Number: Addition and Subtraction		
2C1a Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.	Add and Subtract Mental (1)	1 More, 2 Less
		1 More, 10 Less
		10 More, 10 Less
		Complements to 50 and 100
		Fact Families: Add and Subtract
		Balance Additions to 20
		All about Twenty

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Year 2

Expectation	Topic	Activity
Number: Addition and Subtraction (Continued)		
2C1b Add and subtract numbers mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers.	Add and Subtract Mental (1)	10 More, 10 Less
		Add 3 Single Digit Numbers
		Add 3 Numbers Using Bonds to 10
		Fact Families: Add and Subtract
		Addictive Addition
		Balance Additions to 20
	Add and Subtract Mental (2)	Problems: Add and Subtract
		Missing Numbers
		Magic Mental Addition
		Magic Mental Addition
		Add to Two 2-Digit Numbers
		Repartition to Subtract
		Bar Model Problems 1
2C2 Add and subtract numbers using concrete objects, pictorial representations, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers.	Add and Subtract Mental (1)	10 More, 10 Less
		Add 3 Single Digit Numbers
		Add 3 Numbers Using Bonds to 10
		Fact Families: Add and Subtract
		Addictive Addition
		Balance Additions to 20
	Add and Subtract Mental (2)	Problems: Add and Subtract
		Missing Numbers
		Magic Mental Addition
		Magic Mental Addition
		Add to Two 2-Digit Numbers
		Repartition to Subtract
		Bar Model Problems 1
2C3 Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.	Add and Subtract Mental (1)	Balance Additions to 20
		Fact Families: Add and Subtract
	Add and Subtract Mental (2)	Missing Numbers
2C4 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.	Add and Subtract Mental (1)	Fact Families: Add and Subtract
	Add and Subtract Mental (2)	Problems: Add and Subtract
		Missing Numbers
		Bar Model Problems 1
2C9a Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	Add and Subtract Mental (1)	Fact Families: Add and Subtract
		Balance Additions to 20

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Year 2

Expectation	Topic	Activity
Number: Multiplication and Division		
2C6 Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	Multiply and Divide	Groups of Two
		Groups of Five
		Groups of Ten
		Dividing Twos
		Dividing Fives
		Dividing Tens
		Multiplication Turnarounds
	Number and Place Value Counting	Count by Twos
		Count by Fives
		Count by Tens
		Count by 2s, 5s and 10s
	Number and Place Value (2)	Odd or Even
		Odd and Even Numbers 1
2C7 Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.	Multiply and Divide	Multiplication Arrays
		Multiplication Turnarounds
		Multiplication Problems 1
		Frog Jump Multiplication
2C8 Solve problems involving multiplication and division using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Multiply and Divide	Divide Into Equal Parts
		Make Fair Shares
		Multiplication Problems 1
		Multiplication Turnarounds
2C9b Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	Multiply and Divide	Multiplication Turnarounds
Number: Fractions		
2F1a Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity.	Fractions	Shade Fractions
		Divide Into Equal Parts
		Model Fractions
		Halves and Quarters
		Fractions of a Collection
		Fractions of a Collection 1
		Part-Whole Rods 1
		Make Fair Shares
		Uneven Partitioned Shapes
2F1b Write simple fractions e.g. 1/2 of 6 = 3.	Fractions	Divide Into Equal Parts
		Model Fractions
2F2 Recognise the equivalence of 2/4 and 1/2.		

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Year 2

Expectation	Topic	Activity
Measurement		
2M1 Compare and order lengths, mass, volume/capacity and record the results using >, < and =	Length, Mass and Volume	How Full? How Heavy? How Long is That? Measuring Length with Blocks Temperature Using a Litre Which Measuring Tool?
2M3a Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.	Time and Money	Who has the Money? (GBP) How Much Change? (GBP)
2M3b Find different combinations of coins that equal the same amounts of money.	Time and Money	Who has the Money? (GBP)
2M4a 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.	Time and Money	Five Minute Times Tell Time to the Half Hour Quarter to and Quarter Past
2M4b Compare and sequence intervals of time.	Time and Money	Days of the Week Months of the Year
2M4c Know the number of minutes in an hour and the number of hours in a day.		
2M9 Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	Time and Money	Who has the Money? (GBP) How Much Change? (GBP)
Geometry: Properties of Shapes		
2G1a Compare and sort common 2-D shapes and everyday objects.	Properties of Shapes	Collect the Shapes 1 How Many Conrners? Count Sides and Corners
2G1b Compare and sort 3-D shapes and everyday objects.	Properties of Shapes	Collect the Objects Relate Shapes and Solids Match the Solid 1 How Many Edges? How Many Faces? Faces, Edges and Vertices
2G2a Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.	Properties of Shapes	Collect the Shapes 1 Count Sides and Corners Symmetry
2G2b Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.	Properties of Shapes	How Many Edges? How Many Corners? How Many Faces? Faces, Edges and Vertices
2G3 Identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid.	Properties of Shapes	Relate Shapes and Solids

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Year 2

Expectation	Topic	Activity
Geometry: Position and Direction		
2P1 Order and arrange combinations of mathematical objects in patterns and sequences.	Problem Solving	Complete the Pattern
		Colour Patterns
		Pattern Error
		Describing Patterns
2P2 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).	Position and Direction	Flip, Slide, Turn
		Following Directions
		Left or Right?
		Where is it?
Statistics		
2S1 Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	Statistics	More or Less?
		Picture Graphs
		Column Graphs
		Sorting Data
		Tallies
		Making Graphs
		Reading from a Column Graph
		Caroll Diagram
2S2 Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	Statistics	More or Less?
		Picture Graphs
		Column Graphs
		Sorting Data
		Tallies
		Making Graphs
		Reading from a Column Graph
		Caroll Diagram
2S3 Ask and answer questions about totalling and comparing categorical data.	Statistics	More or Less?
		Picture Graphs
		Column Graphs
		Sorting Data
		Tallies
		Making Graphs
		Reading from a Column Graph
		Caroll Diagram

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Lower KS2: Years 3 & 4

The national curriculum states:

"The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers."

Year 3

Expectation	Topic	Activity
Number: Place Value		
3N1b Count from 0 in multiples of 4, 8, 50 and 100	Number and Place Value 1	Skip Counting
		Skip Counting with Coins
	Multiply and Divide	Groups of Four
		Groups of Eight
3N2a Compare and order numbers up to 1000; read and write numbers up to 1000 in numerals and in words.	Number and Place Value 1	Ascending Order
		Descending Order
		Compare Numbers to 100
		Which is Bigger?
		Shich is Smaller?
		Place Value 1
		Repartition Two-Digit Numbers
	Number and Place Value 2	Place Value 2
		Model Numbers
		Place Value to Thousands
		Partition and Rename 1
		Place Value Partitioning
3N2b Find 10 or 100 more or less than a given number.	Number and Place Value 1	10 More, 10 Less
3N3 Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).	Number and Place Value 2	Place Value 2
		Model Numbers
		Place Value to Thousands
		Partition and Rename 1
		Place Value Partitioning
3N4 Identify, represent and estimate numbers using different representations.	Number and Place Value 1	Place Value 1
		Repartition Two-Digit Numbers
		Number Lines
	Number and Place Value 2	Place Value 2
		Model Numbers
		Place Value to Thousands
		Partition and Rename 1
		Place Value Partitioning
3N6 Solve number problems and practical problems involving these ideas.	Number and Place Value 1	Repartition Two-Digit Numbers
	Add and Subtract Mental	Missing Numbers

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Year 3

Expectation	Topic	Activity
Number: Addition and Subtraction		
3C1 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 Mental	Complements to 10, 20, 50
		Complements to 50 and 100
		Missing Numbers
		Estimate Sums
		Estimate Differences
		Pyramid Puzzles 1
		Magic Mental Addition
		Magic Mental Subtraction
3C2 Add and subtract numbers with up to three digits using formal written methods of columnar addition and subtraction.	Add and Subtract Written (1)	Columns that Add
		Columns that Subtract
		Column Addition
		Column Subtraction
		Add Two 2-Digit Numbers
		Add Three 2-Digit Numbers
		Subtract Numbers
		2-Digit Differences
		Add 3-Digit Numbers
		3-Digit Differences
	Add and Subtract Written (2)	Strategies for Column Addition
		Add Two 2-Digit Numbers: Regroup
		2-Digit Differences: Regroup
		Add Numbers: Regroup a Ten
		Add 3-Digit Numbers: Regroup
		Subtract Numbers: Regroup
		Add Three 2-Digit Numbers: Regroup
		Add Multi-Digit Numbers 1
		Find the Missing Number 1
3C4 Solve problems, including missing number problems using number facts, place value, and more complex addition and subtraction.	Problem Solving	Commutative Property of Addition
		Missing Numbers
		Missing Numbers 1
		Partition Puzzles 1
		Bar Model Problems 2
		Pyramid Puzzles 1
		Problems: Add and Subtract
	Add and Subtract Measures	How Much Change?

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Year 3

Expectation	Topic	Activity
Number: Multiplication and Division		
3C6 Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	Multiply and Divide	Groups of Three
		Groups of Four
		Groups of Eight
		Dividing Threes
		Dividing Fours
		Dividing Eights
		Related Facts 2
		Times Tables
		Fact Familes: Multiply and Divide
3C7 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.	Multiply and Divide	Related Facts 2
		Times Tables
		Fact Familes: Multiply and Divide
		Multiply: 2-Digit by 1-Digit
		Multiply Multiples of 10
		Frog Jump Multiplication
3C8 Solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects.	Multiply and Divide	Related Facts 2
		Bar Model Problems 2
		I am Thinking of a Number!
		Fill the Jars
Number: Fractions		
3F1a 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.		
3F1b Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.	Fractions 1	Partition into Equal Parts
		What Fraction is Shaded?
		Thirds and Sixths
		Uneven Partitioned Shapes 1
		Uneven Partitioned Shapes 2
		Model Fractions
		Part-Whole Rods 1
		Fraction Fruit Sets 1
		Fractions of a Collection 1
		Fractions of a Collection 2
3F1c Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.	Fractions 1	Unit Fractions
		Fraction of an Amount
		Fractions of a Collection 1
		Fractions of a Collection 2
	Fractions 2	Identifying Fractions on a Number Line
3F2 Recognise and show, using diagrams, equivalent fractions with small denominators.	Fractions 2	Equivalent Faction Wall 1
		Shading Equivalent Fractions
		Uneven Partitioned Shapes

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Year 3

Expectation	Topic	Activity
Number: Fractions (Continued)		
3F3 Compare and order unit fractions and fractions with the same denominators.	Fractions 2	Identifying Fractions on a Number Line
		Comparing Fractions 1
		Compare Fractions 1a
3F4 Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7).	Fractions 2	Add: Common Denominator
		Subtract: Common Denominator
		Add Subtract Fractions 1
3F10 Solve problems that involve fractions.	Fractions 1	Fraction Fruit Sets 1
		Part-Whole Rods
		Partition into Equal Parts
	Fractions 2	Identifying Fractions on a Number Line
Measurement		
Y3M1a Compare lengths (m/cm/mm).		
3M1b Compare mass (kg/g).		
3M1c Compare volume/ capacity (l/ml).		
3M2a Measure lengths (m/cm/mm).	Length, Mass and Volume	Measuring Length
		How Long is That?
3M2b Measure mass (kg/g).	Length, Mass and Volume	How Heavy?
3M2c Measure volume/capacity (l/ml)		
3M4a Tell and write the time from an analogue clock: 12-hour clocks.	Time	What is the Time?
		Tell the Time to the Half Hour
		Quarter to and Quarter Past
		Five Minute Times
3M4b Tell and write the time from an analogue clock: 24-hour clocks.	Time	24 Hour Time
3M4d Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.	Time	What is the Time?
		Tell the Time to the Half Hour
		Quarter to and Quarter Past
		Five Minute Times
		24 Hour Time
3M4e Know the number of seconds in a minute and the number of days in each month, year and leap year.	Time	Using a Calendar
3M4f Compare durations of events, for example to calculate the time taken by particular events or tasks.		
3M7 Measure the perimeter of simple 2-D shapes.		
3M9a Add and subtract amounts of money to give change, using both £ and p in practical contexts.	Add and Subtract Measures	How Much Change?
		Money (GBP)
3M9b Add and subtract lengths (m/cm/mm).		
3M9c Add and subtract mass (kg/g).		
3M9d Add and subtract volume/capacity (l/ml).		

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Year 3

Expectation	Topic	Activity
Geometry: Properties of Shapes		
3G2 Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Properties of Shapes	Sides, Angles and Diagonals
		What Line Am I?
3G3a Draw 2-D shapes.		
3G3b Make3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.	Properties of Shapes	Collect the Objects
		Faces, Edges and Vertices 1
		Faces, Edges and Vertices 2
		Match the Solid
3G4a Recognise that angles are a property of shape or a description of a turn.	Properties of Shapes	Sides, Angles and Diagonals
		Right Angle Relations
3G4b 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.	Properties of Shapes	Right Angle Relations
Statistics		
3S1 Interpret and present data using bar charts, pictograms and tables.	Statistics	Tallies
		Caroll Diagram
		Interpreting Tables
		Bar Graphs 1
		Add and Subtract Using Graphs
		Pictographs
		Bar Graphs 2
		Reading from a Column Graph
3S2 Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts, pictograms and tables.	Statistics	Interpreting Tables
		Bar Graphs 1
		Add and Subtract Using Graphs
		Pictographs

Primary National Curriculum Alignment for England

Year 4

Expectation	Topic	Activity
Number: Place Value		
4N1 Count in multiples of 6, 7, 9, 25 and 1000.	Multiply and Divide	Groups of Six
		Groups of Seven
		Groups of Nine
4N2a Order and compare numbers beyond 1000.	Number and Place Value	Put in Order 1
		Integers on a Number Line
		Place Value to Thousands
		Place Value 3
4N2b Find 1000 more or less than a given number.		
4N3a Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).	Number and Place Value	Expanding Numbers
		Partition and Rename 2
		Place Value 3
		Place Value to Thousands
4N3b 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.		
4N4a Identify, represent and estimate numbers using different representations.	Length, Perimeter and Area	Measuring Length
	Statistics	Interpreting Tables
		Reading from a Bar Chart
	Time	Using Timetables
4N4b Round any number to the nearest 10, 100 or 1000.	Number and Place Value Rounding	Nearest 10?
		Nearest 100?
		Nearest 1000?
		Rounding Numbers
	Add and Subtract Mental	Estimate Sums
		Estimate Differences
4N5 Count backwards through zero to include negative numbers.	Number and Place Value	Integers on a Number Line
4N6 Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	Problem Solving	Find the Missing Number 1
		Missing Numbers 1
		Missing Numbers 2
		Fit the Conditions 1
		I am Thinking of a Number!

Primary National Curriculum Alignment for England

Year 4

Expectation	Topic	Activity
Number: Addition and Subtraction (Continued)		
4C2 Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	Add and Subtract Mental	Bump Add and Subtract
		Split Add and Subtract
		Pyramid Puzzles 2
	Add and Subtract Written	Strategies for Column Addition (UK)
		Add 3-Digit Numbers
		Add 3-Digit Numbers: Regroup (UK)
		3-Digit Differences with Zeros
		Add Three 3-Digit Numbers: Regroup (UK)
		Adding Colossal Columns (UK)
		Subtracting Colossal Columns
	Problem Solving	Problems: Add and Subtract 2
4C3 Estimate and use inverse operations to check answers to a calculation.	Add and Subtract Mental	Estimate Sums
		Estimate Differences
4C4 Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Add and Subtract Mental	Pyramid Puzzles 2
	Add and Subtract Written Methods	Add Three 3-Digit Numbers: Regroup (UK)
	Problem Solving	I Am Thinking of a Number!
		Partition Puzzles 2
		Problems: Add and Subtract 2
Number: Multiplication and Division		
4C6a Recall multiplication and division facts for multiplication tables up to 12 × 12.	Multiply and Divide Facts	Groups of Six
		Groups of Seven
		Groups of Nine
		Dividing Sixes
		Dividing Sevens
		Dividing Nines
		Times Tables
4C6b Use place value, known and derived facts to multiply and divide mentally including: multiplying by 0 and 1; dividing by 1; multiplying three numbers.	Multiply and Divide	Mental Methods Division
		Mental Methods Multiplication
		Related Facts 2
		Multiply 3 Single-Digit Numbers
	Problem Solving	Problems: Times and Divide
4C6c Recognise and use factor pairs and commutativity in mental calculations.	Multiply and Divide	Related Facts 2
	Problem Solving	Problems: Times and Divide
4C7 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	Multiply and Divide	Multiply: 1-Digit Number
		Multiply: 1-Digit Number, Regoup
		Multiply: 2-Digit by 1-Digit
4C8 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 how n objects are connected to m objects.	Problem Solving	I Am Thinking of a Number!
		Problems: Times and Divide

Primary National Curriculum Alignment for England

Year 4

Expectation	Topic	Activity
Number: Fractions		
4F1 Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.		
4F2 Recognise and show, using diagrams, families of common equivalent fractions.	Fractions	Equivalent Fraction Wall 2
		Shading Equivalent Fractions
4F4 Add and subtract fractions with the same denominator.	Fractions	Add: Common Denominator
		Subtract: Common Denominator
		Add Subtract Fractions 1
		One Take Fraction
4F6a Recognise and write decimal equivalents to ¼ ½ ¾.		
4F6b Recognise and write decimal equivalents of any number of tenths or hundredths.	Fractions	Fractions
	Decimals	Decimal Place Value
4F7 Round decimals with one decimal place to the nearest whole number.	Decimals	Comparing Decimals 1
4F8 Compare numbers with the same number of decimal places up to two decimal places.	Decimals	Comparing Decimals 1
4F9 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 units, tenths and hundredths.	Decimals	Decimal Place Value
4F10a 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.	Fractions	Fraction Fruit Sets
		Counting With Fractions on the Number Line
4F10b Solve simple measure and money problems involving fractions and decimals to two decimal places.	Problem Solving	Fraction Length Models
Measurement		
4M1 Compare different measures, including money in pounds and pence.		
4M2 Estimate different measures, including money in pounds and pence.		
4M4a Read, write and convert time between analogue and digital 12-hour clocks.	Time	Time Elapsed
4M4b Read, write and convert time between analogue and digital 24-hour clocks.	Time	24 Hour Time
		What Time Will It Be?
4M4c Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Time	Elapsed Time
		Hours and Minutes
		Using Timetables
		What Time Will It Be?

Primary National Curriculum Alignment for England

Year 4

Expectation	Topic	Activity
Measurement (Continued)		
4M5 Convert between different units of measure (e.g. kilometre to metre; hour to minute).	Length, Perimeter and Area	Operations with Length
	Units of Measure	Converting cm and mm
		Centimetres and Metres
		Kilometre Conversions
		Metres and Kilometres
		Grams and Kilograms
		Kilogram Conversions
		Litre Conversions
		Mililitres and Litres
4M7a Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	Length, Perimeter and Area	Measuring Length
		Perimeter of Shapes
		Perimeter Squares and Rectangles
4M7b Find the area of rectilinear shapes by counting squares.	Length, Perimeter and Area	Area of Shapes
		Biggest Shape
		Equal Areas
4M9 Calculate different measures, including money in pounds and pence.	Length, Perimeter and Area	Operations with Length
	Problem Solving	Mass Word Problems
Geometry: Properties of Shapes		
4G2a Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	Properties of Shapes	Collect the Polygos
		Collect More Shapes
		Collect the Objects 2
		Triangle Tasters
		Equal Angles
4G2b Identify lines of symmetry in 2-D shapes presented in different orientations.	Properties of Shapes	Symmetry or Not?
		Symmetry
respect to a specific line of symmetry.		
4G4 Identify acute and obtuse angles and compare and order angles up to two right angles by size.	Properties of Shapes	What Type of Angle?
		Classifying Angles
		Equal Angles
Geometry: Position and Direction		
4P2 Describe movements between positions as translations of a given unit to the left/right and up/down.	Position and Direction	Following Directions
4P3a Describe positions on a 2-D grid as coordinates in the first quadrant.	Position and Direction	Coordinate Graphs: 1st Quadrant
		Coordinate Meeting Place
		Map Coordinates
		Using a Key
4P3b Plot specified points and draw sides to complete a given polygon.	Position and Direction	Coordinate Meeting Place
		Using a Key
Statistics		
4S1 Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	Statistics	Interpreting Tables
		Reading from a Bar Chart
		Venn Diagram 1
4S2 Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Statistics	Add and Subtract Using Graphs

Primary National Curriculum Alignment for England

Upper KS2: Years 5 & 6

The national curriculum states:

"The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio."

Year 5

Expectation	Topic	Activity
Number: Place Value		
5N1 Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.	Problem Solving	Pick the Next Number
5N2 Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.	Number and Place Value	Integers on a Number Line
		Numbers from Words to Digits 1
		Place Value to Millions
5N3a Determine the value of each digit in numbers up to 1 000 000.	Number and Place Value	Expanded Notation
		Partition and Rename 3
		Place Value to Millions
5N3b Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	Number and Place Value	Convert from Roman Numerals
		Convert to Roman Numerals
5N4 Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.	Number and Place Value	Rounding Numbers
	Add and Subtract Mental	Estimate Sums
		Estimate Differences
		Estimation: Add and Subtract
	Multiplication and Division Mental	Estimate Products
		Estimation: Multiply and Divide
5N5 Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.	Number and Place Value	Integers on a Number Line
5N6 Solve number problems and practical problems that involve all of the above.	Add and Subtract Mental	Estimate Sums
		Estimate Differences
		Estimation: Add and Subtract
	Multiplication and Division Mental	Estimate Products
		Estimation: Multiply and Divide
	Problem Solving	Pick the Next Number
		Find the Missing Number 2
		Problems: Add and Subtract 1
		Problems: Add and Subtract 2
		Problems: Multiply and Divide
		I am Thinking of a Number!
		Magic Symbols 1
		Fit the Conditions 1

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Year 5

Expectation	Topic	Activity
Addition and Subtraction		
5C1 Add and subtract numbers mentally with increasingly large numbers	Add and Subtract Mental	Jump Add and Subtract
		Bump Add and Subtract
		Split Add and Subtract
		Estimate Sums
		Estimate Differences
		Estimate: Add and Subtract
5C2 Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).	Add and Subtract Written	Add 3-Digit Numbers: Regroup (UK)
		3-Digit Differences with Zeros
		Add Multi-Digit Numbers
		Adding Colossal Columns
		Subtracting Colossal Columns
5C3 Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Number and Place Value	Rounding Numbers
	Add and Subtract Mental	Estimate Sums
		Estimate Differences
		Estimate: Add and Subtract
	Add and Subtract Decimals	Estimate Decimal Sums 1
		Estimate Decimal Differences 2
5C4 Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Problem Solving	Pick the Next Number
		Find the Missing Number 2
		Problems: Add and Subtract 2
		Mass Word Problems
		I Am Thinking of a Number!
		Magic Symbols 1
Multiplication and Division		
5C5a Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	Multiply and Divide Facts	Fact Families: Multiply and Divide
		Multiples
		Factors
	Multiply and Divide Mental	Divisibility Tests (2, 5, 10)
		Divisibility Tests (2, 4, 9)
	Problem Solving	Fit the Conditions 1
5C5b Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.	Number and Place Value	Prime or Composite?
5C5c Establish whether a number up to 100 is prime and recall prime numbers up to 19.	Number and Place Value	Prime or Composite?
5C5d Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}).		

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Year 5

Expectation	Topic	Activity
Multiplication and Division (Continued)		
5C6a Multiply and divide numbers mentally drawing upon known facts.	Multiply and Divide Facts	Multiplication Facts
		Division Facts
	Multiply and Divide Mental	Divisibility Tests (2, 5, 10)
		Divisibility Tests (3, 4, 9)
		Double and Halve to Multiply
		Estimation: Multiply and Divide
		Mental Methods Multiplication
		Mental Methods Division
5C6b Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	Multiply and Divide Mental	Multiplying by 10, 100, and 1000
		Dividing by 10, 100 and 1000
5C7a 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.	Multiply and Divide Written	Grid Methods 2
		Grid Methods 3
		Long Multiplication
		Contracted Multiplication
		Multiply 2 Digits Area Model
		Multiply: 2-Digit Number, Regroup
5C7b 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.	Multiply and Divide Written	Remainders by Tables
		Short Division
5C8a Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.	Multiply and Divide Facts	Fact Families: Multiply and Divide
	Problem Solving	Problems: Multiply and Divide
5C8b Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	Problem Solving	I am Thinking of a Number!
		Magic Symbols
		Mass Word Problems
		Pick the Next Number
		Problems: Add and Subtract 1
		Problems: Add and Subtract 2
		Problems: Multiply and Divide
5C8c Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	Problem Solving	Capacity Word Problems
		Fraction Word Problems
		Mass Word Problems
		Problems: Multiply and Divide
Number: Fractions		
5F2a Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 = 1 1/5).	Fractions	Converting Mixed and Improper
		Identifying Fractions Beyond 1
		Improper to Mixed
		Mixed and Improper Fractions on a Number Line
		What Mixed Number is Shaded?
5F2b Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.	Fractions	Equivalent Fractions
		Equivalent Fractions 1
		Equivalent Fractions on a Number Line 1
		Shading Equivalent Fractions

Primary National Curriculum Alignment for England

Year 5

Expectation	Topic	Activity
Number: Fractions (Continued)		
5F3 Compare and order fractions whose denominators are all multiples of the same number.	Fractions	Comparing Fractions 2
		Ordering Fractions
5F4 Add and subtract fractions with the same denominator and multiples of the same number.	Caculating with Fractions	Add Like Fractions
		Subtract Like Fractions
5F5 Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	Caculating with Fractions	Fraction By Whole Number
		Model Fractions to Multiply
5F6a Read and write decimal numbers as fractions (e.g. 0.71 = 71/100).	Fractions, Decimal an Percentage	Decimals to Fractions
5F6b Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	Fractions, Decimal an Percentage	Decimals From Words to Digits
		Fractions to Decimals
5F7 Round decimals with two decimal places to the nearest whole number and to one decimal place.	Fractions, Decimal an Percentage	Rounding Decimals
	Add and Subtract Decimals	Estimate Decimal Differences
		Estimate Decimal Sums
5F8 Read, write, order and compare numbers with up to three decimal places.	Fractions, Decimal an Percentage	Comparing Decimals 2
		Decimal Order
		Decimals on a Number Line
		Decimals From Words to Digits
5F10 Solve problems involving number up to three decimal places.	Add and Subtract Decimals	Add Decimals 1
		Adding Decimals
		Decimals Complements
		Subtract Decimals 1
		Subtracting Decimals
	Problem Solving	Capacity Word Problems
		Fraction Word Problems
	Volume, Capacity and Mass	Capacity Addition
		Converting Units of Mass
		Converting Volume
		Mass Addition
5F11 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 hundred, and as a decimal fraction.	Fractions, Decimals and Percentage	Decimal to Percentage
		Percentage to Fraction
		Match Decimals and Percentages
		Modelling Percentages
5F12 Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.		

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Year 5

Expectation	Topic	Activity
Measurement		
5M4 Solve problems involving converting between units of time.	Time	Elapsed Time
		Hours and Minutes
		Time Mentals
		What Time Will It Be?
5M5 Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).	Length, Perimeter and Area	Converting Units of Area
		Converting Units of Length
	Volume, Capacity and Mass	Converting Units of Mass
		Converting Volume
5M6 Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.	Length, Perimeter and Area	Inches, Feet, Yards
	Problem Solving	Which Unit of Measurement?
5M7a Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.	Length, Perimeter and Area	Perimeter: Composite Shapes
		Perimeter Detectives 1
		Perimieter of Shapes
		Perimeter: Triangles
5M7b Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm ^{2}) and square metres (m ^{2}) and estimate the area of irregular shapes.	Length, Perimeter and Area	Area: Squares and Rectangles
5M8 Estimate volume (e.g. using 1cm ^{3} blocks to build cubes and cuboids) and capacity (e.g. using water).	Volume, Mass and Capacity	How Many Blocks?
5M9a Use all four operations to solve problems involving measure (e.g. length) using decimal notation, including scaling.	Length, Perimeter and Area	Converting Units of Mass
		Converting Units of Area
		Operations with Length
		Perimeter Detectives
5M9b Use all four operations to solve problems involving measure (e.g. mass) using decimal notation, including scaling.	Volume, Mass and Capacity	Converting Units of Mass
		Mass Addition
	Problem Solving	Fraction Length Models
		Mass Word Problems
5M9c Use all four operations to solve problems involving measure (e.g. volume) using decimal notation, including scaling.	Volume, Mass and Capacity	Capacity Addition
	Problem Solving	Capacity Word Problems
5M9d Use all four operations to solve problems involving measure (e.g. money) using decimal notation, including scaling.		

Primary National Curriculum Alignment for England

Year 5

Expectation	Topic	Activity
Geometry: Properties of Shapes		
5G2a Use the properties of rectangles to deduce related facts and find missing lengths and angles.	Length, Perimeter and Area	Perimeter Detectives
5G2b Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.		
3G3b Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.	Properties of Shapes	Collect the Objects 2
		Nets
		Prisms and Pyramids
		What Prism am I?
		What Pyramid am I?
5G4a Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	Properties of Shapes	Comparing Angles
5G4b Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and ½ a turn (total 180°), other multiples of 90°.		
5G4c Draw given angles, and measure them in degrees (°).	Properties of Shapes	Comparing Angles
		Measuring Angles
Geometry: Position and Direction		
5P2 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.	Position and Direction	Flip, Slide, Turn
		Transformations
Statistics		
5S1 Complete, read and interpret information in tables, including timetables.	Statistics	Using Timetables
5S2 Solve comparison, sum and difference problems using information presented in a line graph.	Statistics	Line Graphs: Interpretation

Primary National Curriculum Alignment for England

Year 6

Expectation	Topic	Activity
Number and Place Value		
6N2 Read, write, order and compare numbers up to 10 000 000.	Number and Place Value	Comparing Numbers
		Numbers From Words to Digits 2
		Numbers From Words to Digits 3
	Patterns and Algebra	Number Sequences up to 1 Million
6N3 Determine the value of each digit in numbers up to 10 000 000.	Number and Place Value	Partition and Rename 3
		Place Value to Millions
		Place Value to Billions
6N4 Round any whole number to a required degree of accuracy.	Number and Place Value	Nearest 10?
		Nearest 100?
		Nearest 1000?
		Nearest Whole Number
	Fractions, Decimal an Percentage	Estimate Decimal Sums 2
		Estimate Decimal Differences
	Add and Subtract	Estimation: Add and Subtract
	Multiply and Divide Mental	Estimation: Multiply and Divide
		Estimate Products
		Estimate Quoitients
6N5 Use negative numbers in context, and calculate intervals across zero.	Add and Subtract	Add Integers
		Integers: Add and Subtract
		Negative or Positive?
6N6 Solve number and practical problems that involve 6N2 – 6N5.	Problem Solving	Magic Symbols 2
		Missing Values: Decimals
	Fractions, Decimal an Percentage	Adding and Subtracting Decimals
	Add and Subtract	Add Integers
		Integers: Add and Subtract
		Negative or Positive?
	Multiply and Divide Written	Integers: Multiply and Divide
Calculation		
6C3 Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	Add and Subtract	Estimation: Add and Subtract
	Multiply and Divide Mental	Estimate: Multiply and Divide
		Estimate Products
		Estimate Quotients
6C4 Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Add and Subtract	3-Digit Differences: 2 Regroupings
	Patterns and Algebra	Word Problems with Letters
	Perimeter, Area and Volume	Perimeter Detectives 2
	Problem Solving	Capacity Word Problems
		Divisibility Tests
		Fraction Word Problems
		Percentage Word Problems
		Problems: Add and Subtract 2
		Problems: Multiply and Divide 1
		Magic Symbols

Primary National Curriculum Alignment for England

Year 6

Expectation	Topic	Activity
Calculation (Continued)		
6C5 Identify common factors, common multiples and prime numbers.	Number and Place Value	Highest Common Factor
		Lowest Common Factor
		Prime or Composite
	Multiply and Divide Written	Factors
		Multiples
6C6 Perform mental calculations, including with mixed operations and large numbers.	Fractions, Decimal an Percentage	Estimate Decimal Sums
		Estimate Decimal Differences
	Add and Subtract	Estimation: Add and Subtract
	Multiply and Divide Mental	Estimate Products
		Estimate Quotients
		Mental Methods Multiplication
		Mental Methods Division
		Multiplying by 10, 100, 1000
		Dividing by 10, 100, 1000
6C7a Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.	Multiply and Divide Written	Multiply: 2-Digit Number, Regroup
		Long Multiplication
6C7b 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, decimals or by rounding as appropriate for the context.	Multiply and Divide Written	Divide: 1-Digit Divisor 1
		Divide: 1-Digit Divisor, Remainder
		Divide: 2-Digit Divisor, Remainder
		Long Division
6C7c 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.	Multiply and Divide Written	Short Division
6C8 Solve problems involving addition, subtraction, multiplication and division.	Problem Solving	Capacity Word Problems
		Divisibility Tests
		Fraction Word Problems
		Magic Symbols 1
		Missing Values: Decimals
		Percentage Word Problems
		Problems: Add and Subtract
		Problems: Multiply and Divide
6C9 Use their knowledge of the order of operations to carry out calculations involving the four operations.	Problem Solving	Integers: Multiply 7 Divide
		Magic Symbols 1
		Order of Operations

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Year 6

Expectation	Topic	Activity
Fractions		
6F2 Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.	Number and Place Value	Highest Common Factor
		Highest Common Multiple
	Fractions	Equivalent Fractions on a Number Line
		Simplifying Fractions
		Ratios
		Converting Mixed and Improper
	Calculating with Fractions	Add Unlike Fractions
		Add Unlike Mixed Fractions
		Subtract Unlike Fractions
		Subtract Unlike Mixed Numbers
6F3 Compare and order fractions, including fractions >1	Fractions	Converting Mixed and Improper
		Counting with Fractions on a Number Line
		Compare Fractions
		Comparing Fractions
		Equivalent Fractions on a Number Line
		Identifying Fractions Beyond 1
		Ordering Fractions 1
6F4 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.	Fractions	Add Like Mixed Numbers
		Add Unlike Fractions
		Add Unlike Mixed Numbers
		Mixed Numerals
		No Common Denominator
		Subtract Like Mixed Numbers
		Subtract Unlike Fractions
		Subtract Unlike Mixed Numbers
6F5a Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. 1/4 × 1/2 = 1/8).	Calculating with Fractions	Multiply Fraction by Fraction
		Multiply Two Fractions 1
6F5b Divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6).	Fractions	Divide Fraction Visual Model
6F6 Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8).	Fractions, Decimal an Percentage	Decimals to Fraction 1
	Fractions	Fractions to Decimals 2
6F9a Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places	Fractions, Decimal an Percentage	Decimals from Words to Digits 2
		Decimals on a Number Line
		Decimal Place Value
	Calculating with Fractions	Multiply Decimals and Powers of 10
	Multiply and Divide Mental	Multiplying by 10, 100, 1000
		Dividing by 10, 100, 1000
6F9b Multiply one-digit numbers with up to two decimal places by whole numbers.	Fractions, Decimal an Percentage	Decimal by Whole Number
6F9c Use written division methods in cases where the answer has up to two decimal places.		
6F10 Solve problems which require answers to be rounded to specified degrees of accuracy.	Fractions, Decimal an Percentage	Rounding Decimals 1

Primary National Curriculum Alignment for England

Year 6

Expectation	Topic	Activity
Fractions (Continued)		
6F11 Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	Fractions	Fraction Wall Labelling
	Fractions, Decimal an Percentage	Calculating Oercentages
		Decimals to Fractions 1
		Decimal to Percentage
		Percentage to Fraction
	Problem Solving	Fraction Word Problems
		Percentage Word Problems
Ratio		
6R1 Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.	Position and Direction	Scale and Measurement
	Perimeter, Area and Volume	Perimeter, Area, Dimension Change
	Problem Solving	Percentage Word Problems
6R2 Solve problems involving the calculation of percentages (e.g. of measures) such as 15% of 360 and the use of percentages for comparison.	Fractions, Decimal an Percentage	Calculating Percentage
		Percentage of a Quantity
	Problem Solving	Percentage Word Problems
6R3 Solve problems involving similar shapes where the scale factor is known or can be found.	Perimeter, Area and Volume	Perimeter, Area, Dimension Change
	Problem Solving	Scale
		Scale Measurement
6R4 Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.		
Algebra		
6A1 Express missing number problems algebraically.	Patterns and Algebra	Find the Missing Number
		Pattern Rules and Table
		Missing Numbres
		Missing Numbers: Variables
	Problem Solving	Magic Symbols 2
		Missing Values: Decimals
		Word Problems with Letters
6A2 Use simple formulae.	Perimeter, Area and Volume	Area: Compound Figures
		Area: Parallelograms
		Area: Quadrilaterals
		Area: Right Angled Triangles
		Area: Squares and Rectangles
		Volume: Cuboid
		Volume: Rectangular Prisms
6A3 Generate and describe linear number sequences.	Patterns and Algebra	Increasing Patterns
		Decreasing Patterns
		Describing Patterns
		Find the Pattern Rule
		Pattern Rules and Table
		Number Sequences up to 1 Million
		Pick the Next Number
		Table of Values
6A4 Find pairs of numbers that satisfy number sentences involving two unknowns.	Problem Solving	Magic Symbols 2

Primary National Curriculum Alignment for England

Year 6

Expectation	Topic	Activity
Algebra (Continued)		
6A5 Enumerate all possibilities of combinations of two variables.	Pattern and Algebra	How Many Combinations?
		Possible Outcomes
Measurement		
6M5 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.	Units of Measurement	Capacity Addition
		Centimetres and Metres
		Converting Units of Mass
		Converting Volume
		Grams and Kilograms
		Grams and Milligrams
		Mass Addition
		Metres and Kilometres
		Milimetres and Litres
6M6 Convert between miles and kilometres.		
6M7a Recognise that shapes with the same areas can have different perimeters and vice versa.		
6M7b Calculate the area of parallelograms and triangles.	Perimeter, Area and Volume	Area: Quadrilaterals
		Area: Right Angled Triangles
		Area: Parallelograms
6M7c Recognise when it is possible to use formulae for area of shapes.	Perimeter, Area and Volume	Area: Quadrilaterals
		Area: Right Angled Triangles
		Area: Parallelograms
		Area: Compound Figures
		Area: Squares and Rectangles
6M8a Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3.	Perimeter, Area and Volume	Area: Cuboid
		Area: Rectangular Prisms
	Problem Solving	Capacity Word Problems
6M8b Recognise when it is possible to use formulae for volume of shapes.	Perimeter, Area and Volume	Area: Cuboid
		Area: Rectangular Prisms
	Problem Solving	Capacity Word Problems
6M9 Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.	Units of Measurement	Capacity Addition
		Mass Addition
		Operations with Length
	Perimeter, Area and Volume	Volume: Cuboid
		Volume: Rectangular Prisms
	Position and Direction	Scale
		Scale Measurement
	Problem Solving	Area: Compound Figures
		Capacity Word Problems

Primary National Curriculum Alignment for England

Year 6

Expectation	Topic	Activity
Geometry: Properties of Shapes		
6G2a Compare and classify geometric shapes based on their properties and sizes.	Properties of Shapes	Collect the Objects 2 Identify Parts of Circles Plane Figure Tems Triangle: Acute, Right, Obtuse
6G2b Describe simple 3-D shapes.	Properties of Shapes	Collect the Objects 2
6G3a Draw 2-D shapes using given dimensions and angles.		
6G3b Recognise and build simple 3-D shapes, including making nets.	Properties of Shapes	Collect the Objects 2 Nets
6G4a Find unknown angles in any triangles, quadrilaterals, and regular polygons.	Properties of Shapes	Angles in a Revolution Angle Sum of a Quadrilateral Angle Sum of a Triangle Triangle: Acute, Right, Obtuse
6G4b Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	Properties of Shapes	Angles in a Revolution Angle Sum of a Quadrilateral Angle Sum of a Triangle
6G5 Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.	Properties of Shapes	Identify Parts of Circles 1 Identify Parts of Circles 2
Geometry: Position and Direction		
6P2 Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	Position and Direction	Horizontal and Veritcal Change Rotations: Coordinate Plane Transformations: Coordinate Plane Scale Scale Measurement
6P3 Describe positions on the full coordinate grid (all four quadrants).	Position and Direction	Coordinate Graphs Horizontal and Veritcal Change Rotations: Coordinate Plane Transformations: Coordinate Plane
Statistics		
6S1 Interpret and construct pie charts and line graphs and use these to solve problems.	Statistics	Compound Bar Chart Line Graphs: Interpretation 2 Pie Charts
6S3 Calculate and interpret the mean as an average.	Statistics	Finding the Average Mean

Primary National Curriculum Alignment for England

KS1 Performance Descriptors

We have created a reference framework for attainment and progress based on the National Curriculum for England and the Test Assessment Framework. This framework is linked to **Mathletics performance descriptors** which aim **to describe the typical characteristics of children whose test performance is at the threshold of the expected standard for that key stage.** The performance descriptor only reflects the elements of the programme of study that can be assessed in a written test. These have been developed using guidance from the Standards & Testing Agency.

Strand	Performance Descriptor
Number	[C1 Recall and use addition and subtraction facts.]
	[C1 Subtract two simple two-digit numbers, which do not involve bridging ten (eg: 36 – 24).]
	[C1 Adding three one-digit numbers, where they use known addition or doubling facts (eg: 6 + 6 + 3 or 7 + 3 + 8).]
	[C2 Add and subtract numbers using concrete objects and pictorial representations, including: a two-digit number and ones (eg: 65 + 8, 79 – 6), a two-digit number and tens (eg: 62 + 30, 74 – 20), adding two two-digit numbers (eg: 36 + 41, 29 + 13), adding three one-digit numbers (eg: 9 + 6 + 8).]
	[C3 Use inverse operations to solve missing number problems for addition and subtraction (eg: given 9 + 5 = 14, complete 14 – = 9 and – 9 =).]
	[C4 Solve simple 2-step problems with addition and subtraction (eg: Ben has 5 red marbles and 6 blue marbles. He gives 7 of his marbles to a friend. How many marbles does he have left?).]
	[C6 Recognise odd and even numbers.]
	[C6, C7 Recall and use multiplication and division facts for the 10 multiplication table using the appropriate signs (×, ÷ and =) (eg: 80 ÷ 8 =).]
	[C6, C7 Recall and use multiplication facts for the 2 and 5 multiplication tables and begin to recall and use division facts for the 2 and 5 multiplication tables using appropriate signs (×, ÷ and =) (eg: 2 × = 16, 5 × 6 =).]
	[C8 Solve simple problems involving multiplication and division (eg: Ben shares 15 grapes between 3 friends; how many grapes do they each receive?).]
	[C9 Know that addition and multiplication of two small numbers can be done in any order (commutative) and subtraction of one number from another cannot (eg: 5 × 6 = 6 × 5, but 19 – 12 is not equal to 12 – 19).]
	[F1 Recognise and find half of a set of objects or a quantity (eg: find 1/2 of 18 pencils) and begin to find 1/3 or 1/4 of a small set of objects with support (eg: find 1/3 of nine pencils).]
	[F1 Recognise, find and name fractions, 1/2, 1/3, 1/4, 2/4 and 3/4 of a shape (eg: shade 1/4 or 3/4 of a square split into 4 equal rectangles, or shade 1/2 of a symmetrical shape split into 8 equal parts.]

KS1 Performance Descriptors

Strand	Performance Descriptor
Number	[F2 Recognise the equivalence of two quarters and one half in practical contexts.]
	[N1 Count in multiples of 2, 5 and 10, to 100, forwards and backwards.]
	[N1 Count forwards in multiples of 3, to 18.]
	[N1 Count in steps of 10, to 100, forward and backward (eg: 97, 87, 77, 67, ...).]
	[N2 Read and write numbers to at least 100 in numerals, and phonetically attempts to write numbers to.8 100 in words.]
	[N2, N3 Use place value in whole numbers up to 100 to compare and order numbers, sometimes using < and > signs correctly.]
	[N4 Identify, represent and estimate within a structured environment eg: estimate 33 on a number line labelled in multiples of ten.]
	[N6 Use place value and number facts to solve problems (eg: 60 – = 20).]
Measurement	[M1 Compare and order lengths, mass, volume/capacity (eg: 30cm is longer than 20cm, order parcels weighing 1kg, 11/2kg, 1/2kg).]
	[M2 Choose and use appropriate standard units to measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit (eg: the bucket contains 4 litres of water, scale marked every litre and labelled at 5 litres) using rulers, scales, thermometers and measuring vessels and begin to make good estimates (eg: the book is about 20cm long).]
	[M3 Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value and find different combinations of coins to equal the same amounts of money (eg: find two different ways to make 48p).]
	[M4 Recognise, tell and write the times: o'clock, half past and quarter past and are beginning to recognise quarter to the hour; draw hands on a clock face to show half past and o'clock times.]
	[M0 Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (eg: Mrs Smith buys a cake for 12p and a biscuit for 5p; how much change does she get from 20p?).]

KS1 Performance Descriptors

Strand	Performance Descriptor
Geometry	[G1, G2 Compare and sort common 2-D shapes (eg: semi-circle, rectangle and regular polygons such as pentagon, hexagon and octagon) and everyday objects, identifying and describing their properties (eg: the number of sides or vertices, and are beginning to recognise symmetry in a vertical line).]
	[G1, G2 Compare and sort common 3-D shapes (eg: cone, cylinder, triangular prism, pyramid) and everyday objects, identifying and describing their properties (eg: flat / curved surfaces, and beginning to count number of faces and vertices correctly).]
	[G3 Identify 2-D shapes on the surface of 3-D shapes and images of them (eg: a circle) on a cylinder and a triangle on a pyramid).]
	[P1 order and arrange combinations of mathematical objects in patterns (eg: continue a repeating pattern such as O O + > O O + > O).]
	[P2 Use mathematical vocabulary to describe position, direction (eg: left and right) and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter and half turns.]
Statistics	[S1 Interpret simple pictograms (where the symbols show one to one correspondence), tally charts, block diagrams (where the scale is divided into ones, even if only labelled in multiples of two) and simple tables.]
	[S2 Answer questions by counting the number of objects in each category and sorting the categories by quantity.]
	[S2 Answer questions about totalling and begin to compare simple categorical data (eg: when the pictures or blocks are adjacent).]
Solve problems, communicate and reason mathematically	[C3 Use inverse operations to solve missing number problems for addition and subtraction (eg: There were some people on a bus, six get off leaving seventeen people on the bus. How many were on the bus to start with?).]
	[C4 Solve simple 2-step problems with addition and subtraction, which require some retrieval (eg: There are 12 kittens in a basket, 6 jump out and only 2 jump back in; how many are in the basket now?).]
	[C4, C8 Solve problems with one or two computational steps using addition, subtraction, multiplication and division and a combination of these (eg: Joe has 2 packs of 6 stickers; Mina gives him 2 more stickers; how many stickers does he have altogether?).]

KS1 Performance Descriptors

Strand	Performance Descriptor
Solve problems, communicate and reason mathematically	[C8 Solve simple problems involving multiplication and division (eg: Ahmed buys 3 packs of apples. There are 4 apples in each pack. How many apples does he buy?).]
	[M3, M9 Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (eg: Identify three coins with a total value of 24p or find the two items which cost exactly £1 altogether from a list such as: 70p, 40p, 50p and 30p).]
	[N6, C1 Use place value and number facts to solve problems (eg: 40 + = 70).]

Primary National Curriculum Alignment for England

KS2 Performance Descriptors

We have created a reference framework for attainment and progress based on the National Curriculum for England and the Test Assessment Framework. This framework is linked to **Mathletics performance descriptors** which aim **to describe the typical characteristics of children whose test performance is at the threshold of the expected standard for that key stage.** The performance descriptor only reflects the elements of the programme of study that can be assessed in a written test. These have been developed using guidance from the Standards & Testing Agency.

Strand	Performance Descriptor
Number	[N2, N3 Use place value in whole numbers up to 1 000 000 to compare and order numbers and are beginning to become confident with numbers up to 10 000 000.]
	[N4 Round any whole number to the nearest power of ten.]
	[N5 Use negative numbers in practical contexts such as temperature and calculate intervals across zero.]
	[C1 Show evidence of using mental methods, including jottings where necessary to speed up the process, to add and subtract whole numbers with up to two significant figures (eg: 95 + 36, 5700 – 2900).]
	[C2 Add and subtract whole numbers with more than four digits, using formal written methods where appropriate.]
	[C5 Recognise and use multiples, factors, prime numbers less than 20 and square numbers up to 121.]
	[C6 Use their understanding of place value to multiply and divide whole numbers and decimals with up to two decimal places by 10 or 100 (eg: 1532 ÷ 100 = , ÷ 100 = 6.3).]
	[C6 Multiply and divide whole numbers mentally drawing upon multiplication facts up to 12 × 12 and place value (eg: 60 × 70) and begin to use these facts to work with larger numbers.]
	[C7 Multiply numbers with up to two digits by a two digit number using a formal written method and becoming more confident with multiplication with larger numbers; multiply and divide numbers with up to four digits by a single digit number using the formal written method and becoming more confident with two digit divisors.]
	[F1, F5, R2 Find simple fractions and percentages of whole numbers and quantities (eg: 2/3 of 90; 20 × 1/5; 30% of £60).]
	[F10 Add and subtract decimal numbers that have the same number of decimal places (eg: 157.31 – 29.16).]
	[F2 Recognise and use equivalent fractions (eg: 300/900 = 1/3 ; 4/5 = 8/10 = 80/100).]
	[F2 Add and subtract fractions with the same denominator, using mixed numbers where appropriate for the context (eg: 1 1/5 – 2/5 = 6/5 – 2/5 = 4/5).]

Primary National Curriculum Alignment for England

KS2 Performance Descriptors

Strand	Performance Descriptor
Number	[F4 Add and subtract fractions with the same denominator and multiples of the same number (eg: 1/4 + 5/8 = 7/8) and becoming more confident with more complex fraction calculations.]
	[F6, F11 Recognise and use the equivalences between simple fractions, decimals and percentages (eg: 0.3 = 3/10 = 30%) and becoming more confident with calculating decimal fraction equivalents.]
	[F9 Multiply a one digit decimal number by a single digit number (eg: 0.6 × 8).]
	[R1, R3 Use simple ratio to compare quantities (eg: Every child is given 3 pencils and a pen. 36 pencils were given out. How many pens were needed?) and estimate the distance from a map using a simple scale (eg: where 1 cm represents 100 m).]
	[A1, A4 Find possible values in missing number problems involving one or two unknowns (eg: Ben thinks of two numbers: the sum of the two numbers is 10: multiplied together they make 24: what are Ben's numbers?).]
	[A2 Use simple formulae expressed in words (eg: time needed to cook a chicken: allow 20 minutes plus 40 minutes per kilogram).]
	[A3 Count forwards or backwards in steps of any whole number with one significant figure, eg: 9, 20, 3000 [N1] to generate, describe and complete linear number sequences.]
Measurement	[M4 Read, write and convert time between analogue (including clock faces using Roman numerals) and digital 12 and 24 hour clocks, using am and pm where necessary.]
	[M4 Calculate the duration of an event using appropriate units of time (eg: A film starts at 6:45pm and finishes at 8:05pm. How long did it last?).]
	[M5 Children convert between 'adjacent' metric units of measure for length, capacity and mass (eg: 1.2 kg = 1200 g; how many 200 ml cups can be filled from a 2 litre bottle?; write 605 cm in metres).]
	[M7 Find the perimeter of compound shapes when all side lengths are known or can be easily determined (eg: a simple shape made from two identical rectangles joined together to make an L-shape with given dimensions of the rectangle).]
	[M7 Estimate the area of irregular shapes by counting squares (including half squares and fractions of squares that join with others to make whole squares).]
	[M7 Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes by counting squares.]

KS2 Performance Descriptors

Strand	Performance Descriptor
Geometry	[G3 Recognise, describe simple 3–D shapes, including using nets and other 2–D representations.]
	[G3 Completesimple shapes using given lengths, such as 7.5cm, (accurate to +/ -2 mm) and acute angles that are multiples of 5° (accurate to +/- 2°).]
	[G4, G2 Compare and classify 3–D and 2–D shapes based on their properties (eg: for 2–D shapes: parallel sides, length of sides, type and size of angles, reflective symmetry, regular / irregular polygons; for 3–D shapes: faces, vertices and edges).]
	[G4, G2 Know and use the facts that angles at a point sum to 360°, angles at a point on a straight line sum to 180° and angles in a triangle sum to 180° (eg: calculate the base angles of an isosceles triangle where the other angle is 110°) and identify other multiples of 90°.]
	[P2 Identify, describe and represent the position of a shape following a reflection or translation.]
	[P3 Describe positions on a 2–D co-ordinate grid using axes with equal scales in the first quadrant (in the context of number or geometry) and use co-ordinates to complete a given rectangle; becoming more confident in all four quadrants.]
Statistics	[S1 Complete, read and interpret information presented in tables and bar charts (eg: find the difference between two bars showing temperatures, where one is 20°C and the other is 13°C, on a scale labelled in multiples of 5).]
	[S1 Interpret line graphs (eg: beginning to find the difference between two temperatures on a line graph, where one is 20°C and the other is 13°C, on a scale labelled in multiples of 5) and simple pie charts (eg: a pie chart cut into eight pieces for favourite fruit using whole numbers for each section).]
	[S3 Calculate the mean as an average for simple sets of discrete data (eg: find the mean mass of three parcels weighing 5kg, 3kg and 10kg).]
	[Make simple connections between mathematical ideas.]

KS2 Performance Descriptors

Strand	Performance Descriptor
Solve problems, communicate and reason mathematically	[Develop their own strategies to solve problems by applying their mathematics to a variety of routine and non-routine problems, in a range of contexts (including money and measures, geometry and statistics) using the content described above.]
	[Begin to reason mathematically making simple generalisations, using mathematical language and searching for solutions by trying out ideas of their own.]
	[Identify simple patterns and relationships, and make simple generalisations. They can draw their own conclusions and explain their reasoning in simple contexts using mathematical language (eg: an explanation to satisfy statements such as 'If you add a two-digit number to a two-digit number you cannot get a four-digit number'.]
	[C3 Use rounding and estimation to check their answers and determine, in the context of the problem, appropriate levels of accuracy.]
	[C4, C8 Derive strategies to solve problems with a two or three computational stepsusing addition, subtraction, multiplication and division and a combination of these (eg: extract and add prices from a table and calculate change, or solve problems such as 'Jason bought some bags of green apples (6 for 75p) and some bags of red apples (10 for 90p). He spent £4.20. How many bags of each type of apples did he buy?').]
	[F10, M9 Solve problems involving numbers with up to two decimal places (eg: find the two numbers which sum to 10 from this list: 0.01, 0.11, 1.01, 9.09, 9.9, 9.99).]
	[N6 Select appropriate strategies when calculating depending on the numbers involved.]
	[S2 Solve problems involving data.]