

Mathletics

ARK Curriculum



Years 4-6
January, 2023

Mathletics

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January, 2023

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Year 4

Autumn

Skill Quests

Outcome	Existing Course	Quests	Content
1. Reasoning with 4-digit numbers	KS2 - Year 4	Count in multiples (6, 7, 9, 25 & 1,000)	Counting in multiples of 6
	KS2 - Year 4		Counting in multiples of 7
	KS2 - Year 4		Counting in multiples of 9
	KS2 - Year 4		Counting in multiples of 25
	KS2 - Year 4		Counting in multiples of 1,000
	KS2 - Year 4		Counting in multiples of 6, 7, 9, 25 and 1,000
	KS2 - Year 4	Find 1,000 more or less than a given number	Finding 1,000 more or less than a given number
	KS2 - Year 4	Recognise place value in 4-digit numbers	Recognising the place value of 4-digit numbers
	KS2 - Year 4	Order and compare numbers beyond 1,000	Ordering numbers beyond 1,000
	KS2 - Year 4		Comparing numbers beyond 1,000
	KS2 - Year 4	Identify and represent numbers	Identifying up to 4-digit numbers
	KS2 - Year 4		Representing 4-digit numbers in numerals and words
	KS2 - Year 4		Estimating numbers
	KS2 - Year 4		Partitioning 4-digit numbers
	KS2 - Year 4	Round numbers	Rounding numbers to the nearest 10, 100 or 1,000
2. Addition and subtraction	KS2 - Year 4	Add and subtract multiples of 1,000	Adding and subtracting multiples of 1,000
	KS2 - Year 4	Formal addition: up to 4-digits	Adding two 4-digit numbers - no exchange
	KS2 - Year 4		Adding two 4-digit numbers - one exchange

	KS2 - Year 4		Adding two 4-digit numbers: more than one exchange
	KS2 - Year 4	Formal subtraction: up to 4-digits	Subtracting two 4-digit numbers - no exchange
	KS2 - Year 4		Subtracting two 4-digit numbers - one exchange
	KS2 - Year 4		Subtracting two 4-digit number- with exchange
	KS2 - Year 4	Estimate & use inverse operations	Estimating and using inverse operations
	KS2 - Year 4		Checking accuracy of calculations
	KS2 - Year 4		Estimating additions and subtractions
	KS2 - Year 4	Solve 2-step problems in context	Solving addition and subtraction two-step problems
3. Multiplication and division	KS2 - Year 4	Explore multiplication by 6	Exploring multiplication by 6
	KS2 - Year 4		Recalling and using multiplication by 6
	KS2 - Year 4	Explore multiplication by 7	Exploring multiplication by 7
	KS2 - Year 4		Recalling and using multiplication by 7
	KS2 - Year 4	Explore multiplication by 9	Exploring multiplication by 9
	KS2 - Year 4		Recalling and using multiplication by 9
	KS2 - Year 4	Recall multiplication by 11	Recalling multiplication by 11
	KS2 - Year 4	Recall multiplication by 12	Recalling multiplication by 12
	KS2 - Year 4	Explore division by 6	Exploring division by 6
	KS2 - Year 4		Recalling and using division by 6
	KS2 - Year 4	Explore division by 7	Exploring division by 7
	KS2 - Year 4		Recalling and using division by 7
	KS2 - Year 4	Explore division by 9	Exploring division by 9
	KS2 - Year 4		Recalling and using division by 9
	KS2 - Year 4	Divide by 11	Dividing by 11
	KS2 - Year 4	Divide by 12	Dividing by 12
	KS2 - Year 4	Use place value to multiply and divide	Multiplying by 1 and 0
	KS2 - Year 4		Dividing by 1
	KS2 - Year 4		Multiplying 3 numbers

	KS2 - Year 4	Find and use factor pairs	Finding and using factor pairs
	KS2 - Year 4	Multiply two-digit & three-digit numbers	Multiplying 2- and 3-digit numbers by 1-digit
4. Interpreting and presenting data	KS2 - Year 4	Interpret and present data: bar chart	Interpreting and presenting data in a bar chart
	KS2 - Year 4	Interpret and present data: line graph	Interpreting and presenting data in line graphs
	KS2 - Year 4	Solve comparison/ sum/difference problems	Solving comparison, sum and difference problems

Courses and Activities

Outcome	Existing Course	Topic	Activity Name
1. Reasoning with 4-digit numbers	England Year 4	N - Number and Place Value	Counting up in 6s
	England Year 4		Counting up in 7s
	England Year 4		Which Is Greater?
	England Year 4		Which Is Less?
	England Year 4		Greater Than or Less Than?
	England Year 4		Put in Order 1
	England Year 4		Place Value to Thousands
	England Year 4		Place Value 3
	England Year 4		Partition and Rename 3
	England Year 4		Expanding Numbers
	England Year 4		Missing Numbers 1
	England Year 4	N - Number and Place Value Rounding	Nearest 10?
	England Year 4		Nearest 100?
	England Year 4		Nearest 1000?
	England Year 4		Rounding Numbers
2. Addition and subtraction	England Year 4	N - Add and Subtract Mental	Estimate Sums
	England Year 4		Estimate Differences
	England Year 4		Split Add and Subtract
	England Year 4		Bump Add and Subtract
	England Year 4		Pyramid Puzzles 2
	England Year 4		Count Forward Patterns
	England Year 4		Count Backward Patterns
	England Year 4	N - Add and Subtract Written	Strategies for Column Addition
	England Year 4		Add 3-Digit Numbers
	England Year 4		Add 3-Digit Numbers: Regroup (UK)

	England Year 4		Add Three 3-Digit Numbers: Regroup (UK)
	England Year 4		3-Digit Differences with Zeros
	England Year 4		Adding Colossal Columns (UK)
	England Year 4		Subtracting Colossal Columns
3. Multiplication and division	England Year 4	N - Multiply and Divide Facts	Groups of Six
	England Year 4		Groups of Seven
	England Year 4		Groups of Nine
	England Year 4		Dividing Sixes
	England Year 4		Dividing Sevens
	England Year 4		Dividing Nines
	England Year 4		Division Facts to Twelve
	England Year 4		Multiplication Turn-Abouts
4. Interpreting and presenting data	England Year 4	S - Statistics	Add and Subtract Using Graphs
	England Year 4		Interpreting Tables
	England Year 4		Bar Graphs 2
	England Year 4		Reading from a Bar Chart
	England Year 4		Reading from a Column Graph
	England Year 4		Venn Diagram1

Spring

Skill Quests

Outcome	Existing Course	Quests	Content
5. Securing multiplication facts	KS2 - Year 4	Multiply and divide by 6	Multiplying and dividing by 6
	KS2 - Year 4	Multiply and divide by 7	Multiplying and dividing by 7
	KS2 - Year 4	Multiply and divide by 9	Multiplying and dividing by 9
	KS2 - Year 4	Multiply and divide by 11	Multiplying and dividing by 11
	KS2 - Year 4	Multiply and divide by 12	Multiplying and dividing by 12
6. Fractions	KS2 - Year 4	Recognise & show equivalent fractions	Investigating common equivalent fractions
	KS2 - Year 4	Count in hundredths	Counting in hundredths
	KS2 - Year 4	Connect tenths and hundredths	Reading and writing tenths & hundredths
	KS2 - Year 4	Solve problems: fractions	Making a whole
	KS2 - Year 4		Calculating fractions of a quantity
	KS2 - Year 4		Problem solving: bar models to calculate the whole
	KS2 - Year 4	Add fractions: same denominator	Adding fractions with the same denominator
	KS2 - Year 4	Subtract fractions: same denominator	Subtracting fractions with the same denominator
	KS2 - Year 5	Recognise mixed numbers and improper fractions	Recognising mixed numbers
	KS2 - Year 5		Converting improper fractions and mixed numbers
7. Time	KS2 - Year 4	Convert units of measure - Time	Converting units of time
	KS2 - Year 4	Read, write and convert units of time	Reading, writing and converting units of time
	KS2 - Year 3	Tell the time: analogue clock	Telling the time to 5 minutes on analogue clocks
	KS2 - Year 3		Telling the time to the minute on analogue clocks
	KS2 - Year 3	Tell the time: 12- and 24-hour clock	Telling the time in 12- and 24-hour clock

8. Decimals	KS2 - Year 4	Write tenths as decimals	Introducing tenths as decimals
	KS2 - Year 4		Counting in tenths as decimals
	KS2 - Year 4	Write hundredths as decimals	Introducing decimal hundredths
	KS2 - Year 4	Recognise and write decimal equivalents	Recognising and write decimal equivalents
	KS2 - Year 4	Divide by 10 and 100	Dividing by 10
	KS2 - Year 4		Dividing by 100
	KS2 - Year 4	Round decimals with one decimal place	Rounding decimals to the nearest whole number
	KS2 - Year 4	Compare and order decimal numbers to 2dp	Comparing and ordering decimal numbers
9. Area and perimeter	KS2 - Year 4	Measure and calculate perimeter	Measuring and calculating perimeters
	KS2 - Year 4	Find the area of rectilinear shapes	Finding the area of rectilinear shapes
	KS2 - Year 3	Measure perimeter of 2-D shapes	Measuring perimeter in cm
	KS2 - Year 5	Calculate and compare area	Introducing the square centimetre and square metre
	KS2 - Year 5		Comparing and ordering areas
	KS2 - Year 5		Estimating and comparing areas of irregular shapes

Courses and Activities

Outcome	Existing Course	Topic	Activity Name
5. Securing multiplication facts	England Year 4	N - Multiply and Divide	Mental Methods Multiplication
	England Year 4		Multiply 3 single-digit numbers
	England Year 4		Related Facts 2
	England Year 4		Grid Methods 1
	England Year 4		Multiply: 2-Digit by 1-Digit
	England Year 4		Multiply: 1-Digit Number
	England Year 4		Multiply: 1-Digit Number, Regroup
6. Fractions	England Year 4	N - Fractions	Counting with Fractions on a Number Line

	England Year 4		Shading Equivalent Fractions
	England Year 4		Equivalent Fraction Wall 2
	England Year 4		Add Like Fractions
	England Year 4		Subtract Like Fractions
	England Year 4		Common Denominator
	England Year 4		One take Fraction
7. Time	England Year 4	M - Time	24 Hour Time
	England Year 4		Using Timetables
	England Year 4		Elapsed Time
	England Year 4		What Time Will it Be?
	England Year 4		Hours and Minutes
8. Decimals	England Year 4	N - Decimals	Decimal Place Value
	England Year 4		Comparing Decimals
	England Year 4		Comparing Decimals 1
	England Year 4		Decimal Order
9. Area and perimeter	England Year 4	M - Length, Perimeter and Area	Biggest Shape
	England Year 4		Equal Areas
	England Year 4		Area of Shapes
	England Year 4		Perimeter of Shapes
	England Year 4		Perimeter: Squares and Rectangles 1
	England Year 4		Measuring Length

Summer

Skill Quests

Outcome	Existing Course	Quests	Content
10. Solving measure and money problems	KS2 - Year 4	Convert units of measure - Length	Converting - km, m, cm and mm
	KS2 - Year 4	Convert units of measure - Time	Converting units of time
	KS2 - Year 4	Money: Estimate, compare, calculate	Estimating and rounding amounts of money
	KS2 - Year 4		Comparing amounts of money (inequality symbols)
	KS2 - Year 4		Solving word problems involving money
11. 2-D shape and symmetry	KS2 - Year 4	Compare and classify geometric shapes	Comparing and classifying quadrilaterals
	KS2 - Year 4		Comparing and classifying triangles
	KS2 - Year 4	Identify, compare and order angles	Identifying, comparing and ordering angles
	KS2 - Year 4	Identify lines of symmetry in 2-D shapes	Identifying lines of symmetry in 2-D shapes
	KS2 - Year 4	Draw lines of symmetry	Drawing lines of symmetry
12. Position and direction	KS2 - Year 4	Describe position - first quadrant	Describing positions on a 2-D grid as coordinates
	KS2 - Year 4	Describe translations - coordinate grid	Describing movement between positions
	KS2 - Year 4	Find missing coordinates on polygons	Plotting specified points to complete a polygon
13. Reasoning with patterns and sequences	KS2 - Year 4	Read Roman numerals to 100	Reading Roman numerals to 100
	KS2 - Year 4	Count using negative numbers	Counting using negative numbers
	KS2 - Year 5	Describe square & cube numbers	Introducing & describing square numbers
14. 3-D shape	KS2 - Year 3	Recognise 3-D shapes	Making models of 3-D shapes
	KS2 - Year 3		Comparing, sorting and naming 3-D shapes

Courses and Activities

Outcome	Existing Course	Topic	Activity Name
10. Solving measure and money problems	England Year 4	M- Length, Perimeter and Area	Operations with Length
	England Year 4	M - Units of Measurement	Converting cm and mm
	England Year 4		Centimetres and Metres
	England Year 4		Kilometre Conversions
	England Year 4		Metres and Kilometres
	England Year 4		Grams and Milligrams
	England Year 4		Grams and Kilograms
	England Year 4		Kilogram Conversions
	England Year 4		Litre Conversions
	England Year 4		Millilitres and Litres
	England Year 4	N - Add and Subtract Measures	Money (GBP)
	England Year 3	N - Add and Subtract Measures	How much Change? (GBP)
11. 2-D shape and symmetry	England Year 4	G - Properties of Shapes	Collect the Polygons
	England Year 4		Collect More Shapes
	England Year 4		Collect the Objects 2
	England Year 4		Symmetry or Not?
	England Year 4		Triangle Tasters
	England Year 4		Equal Angles
	England Year 4		What Type of Angle?
	England Year 4		Classifying Angles
	England Year 4		Symmetry
	England Year 4		
12. Position and direction	England Year 4	G - Position and Direction	Map Coordinates
	England Year 4		Following Directions
	England Year 4		Coordinate Meeting Place
	England Year 4		Coordinate Graphs: 1st Quadrant
	England Year 4		Using a Key
13. Reasoning with patterns and sequences	England Year 4	N - Number and Place Value	Converting to Roman Numerals to 100
14. 3-D shape	England Year 3	G - Properties of Shapes	Collect the Objects
	England Year 5		What Prism am I?

Year 5

Autumn

Skill Quests

Outcome	Existing Course	Quests	Content
1. Reasoning with large whole numbers	KS2 - Year 5	Read and write numbers to 1,000,000	Reading and writing numbers to 1,000,000
	KS2 - Year 5		Identifying place value, numbers to 1,000,000
	KS2 - Year 5		Comparing and ordering numbers to 1,000,000
	KS2 - Year 5		Using place value to partition numbers
	KS2 - Year 5		Using non-standard partitioning
	KS2 - Year 5	Count in steps of powers of 10	Counting in steps of powers of 10 up to 1,000,000
	KS2 - Year 5	Round numbers within 1,000,000	Rounding numbers within 1,000,000
	KS2 - Year 5	Read and write Roman numerals to 1,000	Reading and writing Roman numerals to 1,000
2. Problem solving with integer addition and subtraction	KS2 - Year 5	Add/subtract numbers up to 5 digits	Adding whole numbers up to 5 digits
	KS2 - Year 5		Adding whole numbers up to 5 digits
	KS2 - Year 5	Apply efficient add/subtract strategies	Applying efficient add/subtract strategies
	KS2 - Year 5	Use rounding to check calculations	Checking accuracy: addition/subtraction
	KS2 - Year 5	Solve multi-step add/subtract problems	Solving two-step addition and subtraction problems
3. Line graphs and timetables	KS2 - Year 5	Convert units of time	Converting units of time
	KS2 - Year 5	Solve problems using line graphs	Solving problems using line graphs
	KS2 - Year 5	Solve problems with tables	Reading and interpreting data in tables
	KS2 - Year 5		Representing bivariate data in two-way tables
	KS2 - Year 5		Using timetables
4. Multiplication and division	KS2 - Year 5	Identify multiples and factors	Identifying multiples up to 100

	KS2 - Year 5		Identifying factors and common factors
	KS2 - Year 5	Introduce prime and composite numbers	Introducing prime and composite numbers
	KS2 - Year 5	Use known facts to multiply and divide	Using known facts to multiply
	KS2 - Year 5		Using known facts to divide
	KS2 - Year 5		Using known facts to multiply and divide
	KS2 - Year 5	Multiply and divide by 10, 100 and 1,000	Multiplying whole numbers by 10, 100 and 1,000
	KS2 - Year 5		Dividing whole numbers by 10, 100 and 1,000
	KS2 - Year 5	Describe square & cube numbers	Introducing & describing square numbers
	KS2 - Year 5		Introducing & describing cube numbers
	KS2 - Year 5	Solve multiplication/division problems 1	Solving problems using factors and multiples
	KS2 - Year 5		Solving multiplication word problems
	KS2 - Year 5		Solving division word problems
	KS2 - Year 5		Comparing square and cube numbers
	KS2 - Year 5	Solve add/sub, mult/div problems	Using distributive properties
	KS2 - Year 5		Solving missing number problems
5. Perimeter and area	KS2 - Year 5	Calculate perimeter	Calculating perimeter
	KS2 - Year 5	Calculate and compare area	Introducing the square centimetre and square metre
	KS2 - Year 5		Comparing and ordering areas
	KS2 - Year 5		Estimating and comparing areas of irregular shapes
	KS2 - Year 5		Calculating the area of a rectangle

Courses and Activities

Outcome	Existing Course	Topic	Activity Name
1. Reasoning with large whole numbers	England Year 5	N - Number and Place Value	Place Value to Millions
	England Year 5		Rounding Numbers

	England Year 5		Converting to Roman Numerals to 1000
	England Year 5		Converting from Roman Numerals to 1000
2. Problem solving with integer addition and subtraction	England Year 5	N - Add and Subtract Written	Adding Colossal Columns (UK)
	England Year 5		Subtracting Colossal Columns
3. Line graphs and timetables	England Year 5	M – Time	Using Timetables
4. Multiplication and division	England Year 5	N - Multiply and Divide Facts	Multiples
	England Year 5		Factors
	England Year 5		Mental Methods Multiplication
	England Year 5		Mental Methods Division 1
	England Year 5		Multiplying by 10, 100, and 1000
	England Year 5		Dividing by 10, 100, 1000
	England Year 5	N - Multiply and Divide Written	Short Multiplication
	England Year 5		Contracted Multiplication
	England Year 5		Multiply 2 Digits Area Model
	England Year 5		Long Multiplication
	England Year 5		Divide: 1-Digit Divisor 1
	England Year 5		Divide: 1-Digit Divisor, Remainder
	England Year 5		Short Division
	England Year 5		Remainders by Tables
	England Year 5		Word Problems: Multiply and Divide
5. Perimeter and area	England Year 5	M - Length, Perimeter and Area	Perimeter of Shapes
	England Year 5		Calculate Perimeter of Squares and Rectangles
	England Year 5		Area: Squares and Rectangles

Spring

Skill Quests

Outcome	Existing Course	Quests	Content
6. Fractions and decimals	KS2 - Year 5	Compare and order fractions	Comparing/ordering fractions, related denominators
	KS2 - Year 5	Investigate equivalent fractions	Investigating equivalent fractions
	KS2 - Year 5	Recognise mixed numbers and improper fractions	Recognising mixed numbers
	KS2 - Year 5		Converting improper fractions and mixed numbers
	KS2 - Year 5	Round decimals	Rounding decimals
	KS2 - Year 5	Order and compare decimals	Ordering/comparing decimals, up to 3 decimal places
7. Angles	KS2 - Year 5	Compare angles	Comparing angles
	KS2 - Year 5	Measure angles	Measuring angles
	KS2 - Year 5	Classify angles	Classifying angles
8. Fractions, decimals and percentages	KS2 - Year 5	Add fractions	Adding fractions with the same denominator
	KS2 - Year 5		Adding fractions with related denominators
	KS2 - Year 5		Adding 3 or more fractions using models
	KS2 - Year 5		Adding whole numbers & fractions
	KS2 - Year 5		Adding mixed numbers with the same denominator
	KS2 - Year 5	Subtract fractions	Subtracting fractions with the same denominator
	KS2 - Year 5		Subtracting fractions from a whole number, models
	KS2 - Year 5		Subtracting fractions and mixed numbers
	KS2 - Year 5		Subtracting mixed numbers: same denominator
	KS2 - Year 5		Subtracting mixed numbers: related denominators
	KS2 - Year 5		Adding and subtracting fractions: same denominator
	KS2 - Year 5		
	KS2 - Year 5	Multiply fractions by whole numbers	Multiplying fractions by whole numbers

	KS2 - Year 5	Multiply mixed numbers by whole numbers	Multiplying mixed numbers by whole numbers
	KS2 - Year 5	Introduce percentages	Introducing percentages
	KS2 - Year 5	Solve percentage equivalence problems	Converting common fractions to percentages
	KS2 - Year 6	Fractions, decimals and percentages	Representing simple fractions as percentages
	KS2 - Year 6		Representing percentages and decimals
	KS2 - Year 6		Fraction, decimal and percentage equivalence
	KS2 - Year 6	Use common factors and multiples	Equivalent simple fractions, related denominators
	KS2 - Year 6		Using common factors to simplify proper fractions
	KS2 - Year 5	Solve multiplication/division problems 2	Scaling by fractions
	KS2 - Year 5		Solving problems involving simple rates
	KS2 - Year 5	Solve measure problems with decimals	Equivalent measures to 3 decimal places
	KS2 - Year 5		Solving money problems, multiplication & division
9. Transformations	KS2 - Year 5	Reflections and translations	Reflections with coordinates
	KS2 - Year 5		Translations with coordinates
	KS2 - Year 5	Interpret negative numbers in context	Interpreting negative numbers in context
	KS2 - Year 6	Positive & negative numbers in context	Positive and negative numbers in context

Courses and Activities

Outcome	Existing Course	Topic	Activity Name
6. Fractions and decimals	England Year 5	N - Fractions, Decimals and Percentage	Decimals to Fractions 1
	England Year 5		Fractions to Decimals
	England Year 5		Decimals on a Number Line
	England Year 5		Comparing Decimals 2
	England Year 5		Decimal Order
	England Year 5		Decimals from Words to Digits 1

	England Year 5		Rounding Decimals
7. Angles	England Year 5	G - Properties of Shapes	Comparing Angles
	England Year 5		Measuring Angles
8. Fractions, decimals and percentages	England Year 5	N - Fractions	Equivalent Fractions
	England Year 5		Ordering Fractions
	England Year 5		Equivalent Fractions 1
	England Year 5		Compare Fractions 1b
	England Year 5		Compare Fractions 2
	England Year 5		Shading Equivalent Fractions
	England Year 5		What Mixed Number Is Shaded?
	England Year 5		Mixed to Improper
	England Year 5		Improper to Mixed
	England Year 5		Converting Mixed and Improper
	England Year 5		Mixed and Improper Fractions on a Number Line
	England Year 5		Identifying fractions beyond 1
	England Year 5	N - Fraction Calculations	Add Like Fractions
	England Year 5		Subtract Like Fractions
	England Year 5		Fraction by Whole Number
	England Year 5		Model fractions to multiply
	England Year 5	N - Fractions, Decimals and Percentage	Modelling Percentages
	England Year 5		Decimal to Percentage
	England Year 5		Match Decimals and Percentages
	England Year 5		Percentage to Fraction
	England Year 5	N - Problem Solving	Fraction Word Problems
	England Year 5		Fraction Length Models 2
	England Year 5		Percentage Word Problems
	England Year 5		Money Problems: Four Operations with Pounds
9. Transformations	England Year 5	G - Position and Direction	Transformations

Summer

Skill Quests

Outcome	Existing Course	Quests	Content
10. Converting units of measure	KS2 - Year 5	Convert units of mass	Converting between kilograms and grams
	KS2 - Year 5	Convert units of length	Converting between m, cm & mm
	KS2 - Year 5	Convert units of capacity	Converting between litres & millilitres
	KS2 - Year 5	Convert between metric & imperial units	Converting between metric and imperial (length)
	KS2 - Year 5		Converting between metric and imperial (capacity)
	KS2 - Year 5	Multiply and divide by 10, 100 and 1,000	Multiplying whole numbers by 10, 100 and 1,000
	KS2 - Year 5		Dividing whole numbers by 10, 100 and 1,000
11. Calculating with whole numbers and decimals	KS2 - Year 5	Solve measure problems with decimals	Equivalent measures to 3 decimal places
	KS2 - Year 5		Solving money problems, multiplication & division
	KS2 - Year 5	Multiply and divide by 10, 100 and 1,000	Multiplying decimals by 10, 100 and 1,000
	KS2 - Year 5		Dividing decimals by 10, 100 and 1,000
	KS2 - Year 5	Multiply numbers up to 4 digits	Multiplying numbers up to 4 digits: expanded form
	KS2 - Year 5		Multiplying numbers up to 4 digits: area model
	KS2 - Year 5		Multiplying numbers up to 4-digits: algorithm
	KS2 - Year 5	Divide up to 4-digit numbers	Dividing numbers up to 4-digit, no remainders
	KS2 - Year 5		Introducing remainders in division problems
	KS2 - Year 5		Dividing numbers up to 4-digit, remainders
12. 2-D and 3-D shape	KS2 - Year 4	Compare and classify geometric shapes	Comparing and classifying quadrilaterals

	KS2 - Year 4		Comparing and classifying triangles
	KS2 - Year 4	Identify, compare and order angles	Identifying, comparing and ordering angles
	KS2 - Year 5	Identify 3-D shapes from 2-D representations	Connecting nets of 3-D shapes
	KS2 - Year 6	Name the parts of circles	Naming the parts of circles
13. Volume	KS2 - Year 5	Estimate volume	Estimating volume using 1 cm ³ blocks
	KS2 - Year 5	Estimate capacity	Estimating and comparing capacity
14. Problem solving	KS2 - Year 5	Solve multi-step add/subtract problems	Solving two-step addition and subtraction problems
	KS2 - Year 5	Solve problems using line graphs	Solving problems using line graphs
	KS2 - Year 5	Solve problems with tables	Reading and interpreting data in tables
	KS2 - Year 5		Representing bivariate data in two-way tables
	KS2 - Year 5		Using timetables
	KS2 - Year 5	Solve multiplication/division problems 1	Solving problems using factors and multiples
	KS2 - Year 5		Solving multiplication word problems
	KS2 - Year 5		Solving division word problems
	KS2 - Year 5		Comparing square and cube numbers
	KS2 - Year 5		Using distributive properties
	KS2 - Year 5	Solve add/sub, mult/div problems	Solving missing number problems
	KS2 - Year 5		Scaling by fractions
	KS2 - Year 5	Solve multiplication/division problems 2	Solving problems involving simple rates
	KS2 - Year 5		Equivalent measures to 3 decimal places
	KS2 - Year 5	Solve measure problems with decimals	Solving money problems, multiplication & division
	KS2 - Year 5		

Courses and Activities

Outcome	Existing Course	Topic	Activity Name
10. Converting units of measure	England Year 5	M - Length, Perimeter and Area	Converting Units of Length
	England Year 5		Converting Units of Area
	England Year 5	M - Volume, Capacity and Mass	Converting Units of Mass
	England Year 5		Converting Volume
11. Calculating with whole numbers and decimals	England Year 5	N - Multiply and Divide Mental	Multiplying by 10, 100, and 1000
	England Year 5		Dividing by 10, 100, 1000
	England Year 5	N - Fractions, Decimals and Percentage	Multiply Decimals 10 100 1000
	England Year 5	N - Problem Solving	Money Problems: Four Operations with Pounds
	England Year 5	M - Volume, Capacity and Mass	Capacity Word Problems
	England Year 5		Mass Word Problems
12. 2-D and 3-D shape	KS2 - Year 5	G - Properties of Shapes	What Prism am I?
	KS2 - Year 5		What Pyramid am I?
	KS2 - Year 5		Prisms and Pyramids
	KS2 - Year 5		Nets
	KS2 - Year 5		Comparing Angles
	KS2 - Year 5		Measuring Angles
	KS2 - Year 5		Triangles: Acute, Right, Obtuse
	KS2 - Year 5		
13. Volume	N/A	Teacher directed	Teacher directed
14. Problem solving	England Year 5	M - Volume, Capacity and Mass	Capacity Word Problems
	England Year 5		Mass Word Problems
	England Year 5	N - Problem Solving	Money Problems: Four Operations with Pounds
	England Year 5		Capacity Word Problems

Year 6

Autumn

Skill Quests

Outcome	Existing Course	Quests	Content
1. Integers and decimals	KS2 - Year 6	Read and write numbers to 10,000,000	Reading and writing numbers to 10,000,000
	KS2 - Year 6		Identifying place value up to 10,000,000
	KS2 - Year 6		Using place value to partition 7-digit numbers
	KS2 - Year 6		Comparing and ordering numbers to 10,000,000
	KS2 - Year 6	Round numbers of any size	Rounding numbers of any size
	KS2 - Year 6	Solve add/sub multi-step problems	Solving add/sub word problems
2. Multiplication and division	KS2 - Year 6	Multiply multi-digit numbers	Multiplying 3-digits by 2-digits: expanded form
	KS2 - Year 6		Multiplying 4-digits by 2-digits: algorithm
	KS2 - Year 6	Divide by 2-digits, long division	Dividing by 2-digits, expanded form: long division
	KS2 - Year 6		Dividing by 2-digits, algorithm (long division)
	KS2 - Year 6	Divide by 2-digits, short division	Dividing by 2-digits, algorithm (short division)
	KS2 - Year 6	Identify common factors/ multiples/ primes	Identifying prime and composite numbers
	KS2 - Year 6		Finding common factors for two numbers
	KS2 - Year 6		Finding multiples up to 144
	KS2 - Year 6	Multiply/divide decimals by powers of 10	Multiplying decimals by 10, 100 and 1,000
	KS2 - Year 6		Dividing decimals by 10, 100 and 1,000
	KS2 - Year 6	Multiply decimals and whole numbers	Multiplying decimals and whole numbers

	KS2 - Year 6	Divide decimals and whole numbers	Dividing decimals and whole numbers
3. Calculation problems	KS2 - Year 6	Equations with 2 unknowns	Equations with 2 unknowns
	KS2 - Year 6	Write and solve missing number problems	Writing and solving equations
	KS2 - Year 6	Generate linear number sequences	Generating linear number sequences
	KS2 - Year 6		Finding the rule for a linear number sequence
	KS2 - Year 6		Finding the nth term of simple linear sequences
	KS2 - Year 6	Introduce order of operations	Introducing order of operations
	KS2 - Year 6		Grouping symbols in order of operations
	KS2 - Year 6	Solve problems with the 4 operations	Solving multiplication and division word problems
	KS2 - Year 6		Solving addition and subtraction word problems
4. Fractions	KS2 - Year 6	Compare and order fractions	Comparing and ordering proper fractions
	KS2 - Year 6		Comparing and ordering mixed numbers
	KS2 - Year 6		Comparing and ordering improper fractions
	KS2 - Year 6		Comparing and ordering fractions and mixed numbers
	KS2 - Year 6	Use common factors and multiples	Using common factors to simplify proper fractions
	KS2 - Year 6	Interpret fractions as division	Interpreting fractions as division
	KS2 - Year 6	Convert simple fractions to decimals	Converting simple fractions to decimals
	KS2 - Year 6	Add and subtract fractions	Adding fractions, related denominators
	KS2 - Year 6		Adding fractions, unrelated denominators
	KS2 - Year 6		Subtracting fractions, related denominators

	KS2 - Year 6		Subtracting fractions, unrelated denominators
	KS2 - Year 6		Adding/subtracting fractions, related denominators
	KS2 - Year 6		Add/subtract fractions, unrelated denominators
5. Missing angles and lengths	KS2 - Year 6	Classify geometric shapes	Classifying triangles by their sides and angles
	KS2 - Year 6		Classifying quadrilaterals by their features
	KS2 - Year 6		Classifying shapes in a hierarchy
	KS2 - Year 6	Find unknown angles	Calculating interior angles of triangles
	KS2 - Year 6		Calculating interior angles of quadrilaterals
	KS2 - Year 6		Calculating interior angles of regular polygons
	KS2 - Year 6	Find missing angles	Adjacent, straight, and vertically opposite angles

Courses and Activities

Outcome	Existing Course	Topic	Activity Name
1. Integers and decimals	England Year 6	N - Number and Place Value	Put in Order 1
	England Year 6		Nearest 100?
	England Year 6		Nearest 1000?
	England Year 6		Rounding Numbers
2. Multiplication and division	England Year 6	N - Multiply and Divide Mental	Mental Methods Multiplication
	England Year 6		Mental Methods Division 1
	England Year 6		Multiplying by 10, 100, 1000
	England Year 6		Dividing by 10, 100, 1000
	England Year 6	N - Multiply and Divide Written	Integers: Multiply and Divide
	England Year 6		Long Multiplication
	England Year 6		Divide: 1-Digit Divisor 1
	England Year 6		Divide: 1-Digit Divisor, Remainder
	England Year 6		Divide: 2-Digit Divisor, Remainder
	England Year 6		Long Division

	England Year 6		Factors
	England Year 6		Multiples
3. Calculation problems	England Year 6	N - Patterns and Algebra	Number Sequences up to 1 million
	England Year 6		Word problems with letters
	England Year 6	N - Problem Solving	Order of Operations 1 (BIDMAS)
4. Fractions	England Year 6	N – Fractions	Identifying fractions beyond 1
	England Year 6		Converting Mixed and Improper
	England Year 6		Fractions to Decimals
	England Year 6		Compare fractions 2
	England Year 6		Comparing Fractions 2
	England Year 6		Ordering Fractions 1
	England Year 6		Equivalent Fractions on a Number Line 2
	England Year 6		Counting with Fractions on a Number Line
	England Year 6		Simplifying Fractions
	England Year 6	N - Fractions Calculating	Subtract Like Mixed Numbers
	England Year 6		Add Like Mixed Numbers
	England Year 6		Add Unlike Fractions
	England Year 6		Add Unlike Mixed Numbers
	England Year 6		Subtract Unlike Fractions
	England Year 6		Subtract Unlike Mixed Numbers
	England Year 6		No Common Denominator
	England Year 6		Mixed Numerals
5. Missing angles and lengths	England Year 6	G - Properties of Shapes and Angles	Angle Sum of a Quadrilateral
	England Year 6		Angle Sum of a Triangle
	England Year 6		Angles in a Revolution
	England Year 6	G - Properties of Shapes and Position	Triangles: Acute, Right, Obtuse

Spring

Skill Quests

Outcome	Existing Course	Quests	Content
6. Coordinates and shape	KS2 - Year 6	Describe positions, 4 quadrants	Describing positions, 4 quadrants
	KS2 - Year 6		Drawing polygons on the coordinate grid
	KS2 - Year 6	Translations & reflections, 4 quadrants	Reflections, 4 quadrants
	KS2 - Year 6		Understanding translations, 4 quadrants
	KS2 - Year 6	Recognise and describe simple 3-D shapes	Describing and naming prisms and pyramids
	KS2 - Year 6		Investigating cross-sections of prisms & pyramids
	KS2 - Year 6		Connecting 3-D shapes with their nets
	KS2 - Year 6	Name the parts of circles	Naming the parts of circles
7. Fractions	KS2 - Year 6	Multiply proper fractions	Multiplying proper fractions
	KS2 - Year 6	Divide proper fractions by whole numbers	Dividing proper fractions by whole numbers
8. Decimals and measures	KS2 - Year 6	Convert measurements, decimal notation	Converting between common metric units of length
	KS2 - Year 6		Converting between standard metric units of mass
	KS2 - Year 6		Converting between common metric units of capacity
	KS2 - Year 6	Convert between miles and kilometres	Converting between miles and kilometres
	KS2 - Year 6	Area of parallelograms and triangles	Calculating the area of a triangle
	KS2 - Year 6		Calculating the area of a parallelogram
	KS2 - Year 6	Find the volume of cubes and cuboids	Calculating the volume of cubes and cuboids
9. Percentages and statistics	KS2 - Year 6	Fractions, decimals and percentages	Representing simple fractions as percentages
	KS2 - Year 6		Representing percentages and decimals

	KS2 - Year 6		Fraction, decimal and percentage equivalence
	KS2 - Year 6	Calculate percentages	Calculating simple percentages
	KS2 - Year 6		Calculating simple percentages of quantities
	KS2 - Year 6	Identifying pie charts and line graphs	Interpreting and constructing pie charts
	KS2 - Year 6		Interpreting and constructing line graphs
	KS2 - Year 6	Calculate and interpret the mean	Calculating and interpreting the mean
10. Proportion problems	KS2 - Year 6	Solve problems involving scale factor	Solving problems involving scale factor
	KS2 - Year 6	Solve problems with unequal quantities	Solving problems involving unequal quantities
	KS2 - Year 6	Solve multiplication/division problems 1	Solving problems using factors and multiples
	KS2 - Year 6	Challenge problems involving ratio	Solving problems involving ratios

Courses and Activities

Outcome	Existing Course	Topic	Activity Name
6. Coordinates and shape	England Year 6	G - Properties of Shapes and Position	Coordinate Graphs
	England Year 6		Transformations: Coordinate Plane
	England Year 6		Rotations: Coordinate Plane
	England Year 6		Horizontal and Vertical Change
	England Year 6		Identify Parts of Circles 1
	England Year 6		Identify Parts of Circles 2
	England Year 6		Nets
7. Fractions	England Year 6	N - Fractions	Fractions to Decimals 2
	England Year 6	N - Fractions Calculating	Multiply Two Fractions 1
	England Year 6		Divide fractions visual model
	England Year 6	N - Decimals and Percentages	Decimals to Fractions 1
8. Decimals and measures	England Year 6	M - Units of Measurement	Grams and Kilograms
	England Year 6		Grams and Milligrams
	England Year 6		Metres and Kilometres

	England Year 6		Converting Units of Mass
	England Year 6		Centimetres and Metres
	England Year 6		Operations with Length
	England Year 6		Millilitres and Litres
	England Year 6		Converting Volume
	England Year 6	M - Perimeter, Area and Volume	Perimeter Detectives 2
	England Year 6		Volume: Cuboid 1
	England Year 6		Volume: Rectangular Prisms 1
9. Percentages and statistics	England Year 6	S - Statistics	Area: Right Angled Triangles
	England Year 6		Finding the Average
	England Year 6		Mean
10.Proportion problems	N/A	Teacher directed	Pie Charts
			Teacher directed



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