Maths Curriculum Overview 2020-2021

Over the course of the year, every learning objective in Years 1-6 is visited at least once, with most learning objectives being visited multiple times. The first time a learning objective appears in years 1,3,4,5 it is underlined and then when it subsequently reappears, it is not underlined. For some half terms, there appear to be quite a few learning objectives, but those that are revisited may not need to be the main focus as they provide essential building blocks connecting new learning to previous experiences.

| Year | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 | | | | |
|------------|--|-----------------------|-------------------------|-------------------------|------------------------|-------------------------|--|--|--|--|
| Group | | | | | | | | | | |
| Reception | Reception do not follow the Rising Stars Programme of Study. Units of maths content are organised in line with the Early Learning Goals and relevant | | | | | | | | | |
| content fr | ontent from Development Matters and is taught both discretely and across other areas of the EYFS curriculum. | | | | | | | | | |
| | | | | | | | | | | |
| Year R | *Baseline Assessment | *Conceptual | *Ordinal numbers | *Counting in 2's, 5's | *Distance | * Addition and | | | | |
| | including number | development of | *Partitioning using the | and 10's | *Subtraction | subtraction | | | | |
| | recognition and | numbers 1-5 and | cherry model | *Understanding the | *Addition and | *Capacity | | | | |
| | ordering and patterns | subitising. | *Money | symbol = | subtraction as | *Money | | | | |
| | *Count objects with 1:1 | *Identify and | *Conceptual | *Adding using number | inverse operations. | *Pattern | | | | |
| | correspondence. | represent numbers | development of | stories | *Count in 2'5, 5's and | *Doubling, Halving and | | | | |
| | *Know that the last | using objects and | numbers 6-10, inc bar | *Time | 10's. | Sharing | | | | |
| | number in the count is | pictorial | and cherry models. | *Addition and | *Doubling, Halving | *Estimating | | | | |
| | the total size of the | representations | *Positioning numerals | subtraction using + and | and Sharing including | *Revisiting areas which | | | | |
| | group (cardinality) | *Objects can be | on a number line | – symbols. | in problem solving | need consolidating | | | | |
| | *Number recognition | counted in any order | *Compare and order | *2D and 3D shape | contexts. | | | | | |
| | * One more/one less | or can be moved | numerals to 20. | | | | | | | |
| | *Record, using marks | around and there will | *Odd and even | | | | | | | |
| | that can be interpreted | still be the same | numbers | | | | | | | |
| | and explained (40-60 | number present | *Combining two or | | | | | | | |
| | months) | (conservation) | more parts to make a | | | | | | | |
| | *Height and size | *Part-part whole | whole and using the + | | | | | | | |
| | *Time | *2D and 3D shape | symbol | | | | | | | |
| | * Conceptual | *Weighing | | | | | | | | |
| | development of | *Positional language | | | | | | | | |
| | numbers 1-5 including | *Pattern | | | | | | | | |
| | part-part whole model | | | | | | | | | |
| | *Positional vocabulary | | | | | | | | | |

| | | *Understand that anything can be counted including things that we cannot touch e.g. claps, jumps etc | | | | | |
|--|--------|--|---|--|--|--|--|
| *One more/one less. *Representation of number including the number line. *Iength and heights, *Capacity or volume. *Dates, days of the week, weeks, months and related subtraction facts to 20 *Number bonds and related subtraction facts to 20 *Missing number morblems *Missing number problems *Missing number problems *Missing number problems *Add and subtract 1 and 2 digit numbers to 100. *One more/one less. *Representation of numbers 1-20 in numers 1-20 in numbers 1-20 in number sto 100. *One more/one less. *Representation of number including the number i | Year 1 | *One more/one less. *Representation of number including the number line. *length and heights, *mass or weight, *capacity or volume. *Dates, days of the week, weeks, months and years. *Number bonds and related subtraction facts to 20 *One step addition and subtraction problems *Missing number problems *Add and subtract 1 and 2 digit numbers to 20 including zero Maths statements that involve the +/-/= | *One more/one less. *Representation of number including the number line. *Length and heights, *Mass or weight, *Capacity or volume. *Dates, days of the week, weeks, months and years*Number bonds and related subtraction facts to 20 *One step addition and subtraction problems *Missing number problems *Sequencing in chronological order *2D and 3D shapes *Describe position , direction, movement *Count to and across 100 from any given | numbers 1-20 in numerals and words * Numbers to 100. *One more/one less. *Representation of number including the number line. *Count to and across 100 from any given number *Count in multiples of twos, fives and tens *Multiplication and division using concrete objects, pictorial representation and arrays *Time (hours, minutes, seconds) *Tell the time to the hour and half past the hour *Describe position, direction, movement including whole, half, quarter and three | *One more/one less. *Representation of number including the number line. *Count to and across 100 from any given number *Count in multiples of twos and tens *Number bonds and related subtraction facts to 20 *One step addition and subtraction problems *Missing number problems *Add and subtract 1 and 2 digit numbers to 20 including zero Maths statements that involve the +/-/= symbols *Sequencing in | *Describe position , direction, movement Numbers to 100. *One more/one less. *Representation of number including the number line. *Count to and across 100 from any given number *Count in multiples of twos, tens and fives *Length and heights *Mass or weight *Capacity or volume *Money and recognising different denominations of coins and notes Number bonds and related subtraction facts to 20 *One step addition and subtraction | *Multiplication and division using concrete objects, pictorial representation and arrays *Money and recognising different denominations of coins and notes *Finding half and quarter of an object, shape or quantity *2D and 3D shapes *Tell the time to the hour and half past the hour *Describe position , direction, movement including whole, half, quarter and three |

| | | | | | *Missing number problems *Add and subtract 1 and 2 digit numbers to 20 including zero Maths statements that involve the +/-/= symbols | |
|--------|---|---|--|--|---|---|
| | not follow the Rising Stars and across domains to su | • | Units of maths content a | are organised in line wit | th the National Curricu | ulum and taught both |
| Year 2 | *Read and write | *Identify and describe | *Recall and use | *Recognise, find, name | *Recognise and use | The Summer term is |
| iedi Z | numbers to at least 100 | the properties of 2D | multiplication and | and write fractions 1/3, | the inverse | used to revise and |
| | in numerals and words | shapes, including the | division facts for the | 14, 2/4, 34 of a length, | relationship between | consolidate all key skills |
| | *Compare and order | number of sides and | 2,5 and 10 | shape, set of objects or | addition and | from the Autumn and |
| | numbers from 0 up to | line symmetry in a | multiplication tables | quantity | subtraction and use | Spring term. |
| | 100; use ≤and ≥and = | vertical line | *Calculate | *Write simple fractions | this to check | |
| | signs | *Identify and describe | mathematical | e.g. ½ of 6 = 3 and | calculations and | From teacher |
| | | | | 0.6.72 0.0 0 0 | 04.04.4.0.10 | |
| | | • | statements for | recognise the | solve missing number | assessments from the |
| | *Identify, represent | the properties of 3D | | recognise the equivalence of 2/4 and | solve missing number problems | |
| | | the properties of 3D shapes, including the | multiplication and | recognise the equivalence of 2/4 and ½ | problems | assessments from the Autumn and Spring term, year 2 teachers |
| | *Identify, represent and estimate numbers using different | the properties of 3D | | equivalence of 2/4 and | _ | Autumn and Spring term, year 2 teachers |
| | *Identify, represent and estimate numbers | the properties of 3D shapes, including the number of edges, | multiplication and division using the x, | equivalence of 2/4 and ½ | problems *Solve problems | Autumn and Spring |
| | *Identify, represent and estimate numbers using different representations, | the properties of 3D shapes, including the number of edges, vertices and faces | multiplication and division using the x, ÷and = symbols | equivalence of 2/4 and ½ *Compare and order | problems *Solve problems involving | Autumn and Spring term, year 2 teachers plan according to the |
| | *Identify, represent and estimate numbers using different representations, including the number | the properties of 3D shapes, including the number of edges, vertices and faces *Identify 2D shapes on | multiplication and division using the x, ÷and = symbols *Show that | equivalence of 2/4 and ½ *Compare and order lengths, mass, | problems *Solve problems involving multiplication and | Autumn and Spring term, year 2 teachers plan according to the needs of the year |
| | *Identify, represent and estimate numbers using different representations, including the number line. | the properties of 3D shapes, including the number of edges, vertices and faces *Identify 2D shapes on the surface of 3D | multiplication and division using the x, ÷and = symbols *Show that multiplication of two | equivalence of 2/4 and ½ *Compare and order lengths, mass, volume/capacity and | problems *Solve problems involving multiplication and division | Autumn and Spring term, year 2 teachers plan according to the needs of the year |
| | *Identify, represent and estimate numbers using different representations, including the number line. *Recognise odd and | the properties of 3D shapes, including the number of edges, vertices and faces *Identify 2D shapes on the surface of 3D shapes | multiplication and division using the x, ÷and = symbols *Show that multiplication of two numbers can be done | equivalence of 2/4 and ½ *Compare and order lengths, mass, volume/capacity and record results using | problems *Solve problems involving multiplication and division *Interpret and | Autumn and Spring term, year 2 teachers plan according to the needs of the year |
| | *Identify, represent and estimate numbers using different representations, including the number line. *Recognise odd and even numbers | the properties of 3D shapes, including the number of edges, vertices and faces *Identify 2D shapes on the surface of 3D shapes *Compare and sort | multiplication and division using the x, ÷and = symbols *Show that multiplication of two numbers can be done in any order and | equivalence of 2/4 and ½ *Compare and order lengths, mass, volume/capacity and record results using ≤and ≥and = signs | problems *Solve problems involving multiplication and division *Interpret and construct simple | Autumn and Spring term, year 2 teachers plan according to the needs of the year |
| | *Identify, represent and estimate numbers using different representations, including the number line. *Recognise odd and even numbers *Count in steps of 2, 3, | the properties of 3D shapes, including the number of edges, vertices and faces *Identify 2D shapes on the surface of 3D shapes *Compare and sort common 2D and 3D | multiplication and division using the x, ÷and = symbols *Show that multiplication of two numbers can be done in any order and division of one number | equivalence of 2/4 and ½ *Compare and order lengths, mass, volume/capacity and record results using ≤and ≥and = signs *Choose and use | problems *Solve problems involving multiplication and division *Interpret and construct simple pictograms, tally | Autumn and Spring term, year 2 teachers plan according to the needs of the year |
| | *Identify, represent and estimate numbers using different representations, including the number line. *Recognise odd and even numbers *Count in steps of 2, 3, 10 and 5 from 0 and in | the properties of 3D shapes, including the number of edges, vertices and faces *Identify 2D shapes on the surface of 3D shapes *Compare and sort common 2D and 3D shapes and everyday | multiplication and division using the x, ÷and = symbols *Show that multiplication of two numbers can be done in any order and division of one number by another cannot | equivalence of 2/4 and ½ *Compare and order lengths, mass, volume/capacity and record results using ≤and ≥and = signs *Choose and use appropriate standard | problems *Solve problems involving multiplication and division *Interpret and construct simple pictograms, tally charts, block | Autumn and Spring term, year 2 teachers plan according to the needs of the year |

*Recognise the place pictograms, tally *Recognise and use temperature, capacity *Ask and answer value of each digit in a charts, block diagrams the inverse simple questions by using rulers, scales, 2-digit number and simple tables relationship between thermometers and counting the number *Use place value and *Ask and answer addition and measuring vessels. of objects in each number facts to solve subtraction and use *Recognise and use simple questions by category and sorting problems counting the number this to check symbols £ and p to the category by *Recall and use of objects in each calculations and solve combine amounts to quantity addition and category and sorting missing number make a particular value *Ask and answer subtraction facts to 20 the category by problems *Find different questions about and derive and use *Compare and combinations of coins totalling and quantity *Ask and answer related facts up to 100 sequence intervals of to equal the same comparing *Show that addition of questions about time amounts of money categorical data two numbers can be totalling and *Tell and write the *Count in steps of 2, 3, *Solve simple done in any order and comparing categorical time to five minutes, 10 and 5 from 0 and in problems in a subtraction of one data including quarter tens from any number. practical context number from another past/to the hour and involving addition cannot draw the hands on a and subtraction of *Solve problems with clock face to show money of the same unit, including giving addition and these times subtraction *Know the number of change *Recognise and use the minutes in an hour and 3*Recognise and use inverse relationship the number of hours in symbols £ and p to combine amounts to between addition and a day subtraction and use this *Use mathematical make a particular to check calculations vocabulary to describe value and solve missing *Find different position, direction and number problems movement combinations of *Distinguish between coins to equal the rotation as a turn and same amounts of in terms of right angles money for quarter, half and three-quarter turns (clockwise and anticlockwise) *Recognise, find, name and write fractions 1/3,

| | | 14, 2/4, 34 of a length, shape, set of objects or quantity *Write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 | | | |
|--|---|---|--|---|---|
| *Count in multiples of 100 *Place value of 3-digit numbers *Numbers up to 1000 *Representations of number including estimation *Number problem solving *Addition and Subtraction up to 3 digits *Inverse operations *Length (m/cm/mm) *Mass (kg/g) *Volume/capacity (I/ml) *Add and subtract money both £ and p and give change *Bar charts, pictograms and tables *solve one step and 2 step questions using information from bar | *Count in multiples of 4, 8, 50, 100 *Multiplication and division facts for 3, 4, 8 times tables *Multiplication and division statements *Multiplication and division problem solving using scaling and correspondence *2D shapes *Modelling 3D shapes *Angles as a property of a shape or a description of a turn. *Right angles to make a quarter, half, three quarters and whole turn. *Angles greater than or less than a right angle | *Count in multiples of 4, 8, 50, 100; find 10 or 100 more or less than a given number *Place value of 3-digit numbers *Numbers up to 1000 *Representations of number including estimation *Number problem solving *Tell and write the time from an analogue clock, 12 hour and 24 hour clocks *Use Roman Numerals I to XII on analogue clocks *Length (m/cm/mm) *Mass (kg/g) *Volume/capacity (I/mI) *Count up and down in tenths | *Representations of number including estimation *Count up and down in tenths *Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators *Add and subtract fractions with the same denominator within one whole *Compare and order unit fractions with the same denominator *Fraction problem solving *Count in multiples of 4, 8, 50, 100; find 10 or 100 more or less than a given number *Multiplication and division facts for 3, 4, 8 times tables | *2D shapes *Modelling 3D shapes *Angles as a property of a shape or a description of a turn. *Right angles to make a quarter, half, three quarters and whole turn. *Angles greater than or less than a right angle *Identify horizontal and vertical lines and pairs of perpendicular and parallel lines *Count in multiples of 4, 8, 50, 100; find 10 or 100 more or less than a given number *Place value of 3- digit numbers *Numbers up to 1000 | *Representations of number including estimation *Count up and down in tenths *Recognise and use fractions as numbers: unit fractions and nonunit fractions with small denominators *Recognise and show, using diagrams, equivalent fractions with small denominators *Add and subtract fractions with the same denominator within one whole *Compare and order unit fractions with the same denominator *Fraction with the same denominator *Fraction problem solving *Count in multiples of 4, 8, 50, 100; find 10 or |

| charts, pictograms and | *Addition and | *Multiplication and | *Representations of | 100 more or less than a |
|------------------------|------------------------|-------------------------|----------------------|----------------------------|
| tables | Subtraction up to 3 | division statements | number including | given number |
| | digits | *Multiplication and | estimation | *Multiplication and |
| | *Inverse operations | division problem | *Number problem | division facts for 3, 4, 8 |
| | *Add and subtract | solving using scaling | solving | times tables |
| | money both £ and p | and correspondence | *Tell and write the | *Multiplication and |
| | and give change | *Recognise, find and | time from an | division statements |
| | *Bar charts, | write fractions of a | analogue clock, 12 | using mental and |
| | pictograms and tables | discrete set of objects | hour and 24-hour | progressing to formal |
| | *Solve one step and 2 | | clocks | written methods |
| | step questions using | | *Use Roman | *Multiplication and |
| | information from bar | | Numerals I to XII on | division problem solving |
| | charts, pictograms and | | analogue clocks | using scaling and |
| | tables | | *Read time to the | correspondence |
| | | | nearest minute. | *Know numbers of |
| | | | Record and compare | seconds in a minute, |
| | | | times using seconds, | number of days in each |
| | | | minutes, hours | month, year, leap year |
| | | | *Compare duration | *Angles as a property of |
| | | | of events. | a shape or a description |
| | | | *Know numbers of | of a turn. |
| | | | seconds in a minute, | *Right angles to make a |
| | | | number of days in | quarter, half, three |
| | | | each month, year, | quarters and whole |
| | | | <u>leap year</u> | turn. |
| | | | *Bar charts, | *Angles greater than or |
| | | | pictograms and | less than a right angle |
| | | | tables | *Identify horizontal and |
| | | | *Solve one step and | vertical lines and pairs |
| | | | 2 step questions | of perpendicular and |
| | | | using information | parallel lines |
| | | | from bar charts, | *measure the |
| | | | pictograms and | perimeter of simple 2D |
| | | | tables | <u>shapes</u> |
| | | | *Addition and | |
| | | | Subtraction up to 3 | |

| | | | | | digits using formal written methods of columnar addition and subtraction *Inverse operations *Length (m/cm/mm) *Mass (kg/g) *Volume/capacity (I/mI) *Add and subtract money both £ and p and give change | |
|--------|--|---|--|---|---|---|
| Year 4 | *Count in multiple of 1000 *Find 1000 more/less from any given number *Place value of 4-digit numbers *Order and compare numbers beyond 1000 *Representations of number including estimation *Round any number to the nearest 10,100, 1000 *Solving number problems *Addition and Subtraction up to 4- digits using formal written methods of columnar addition and subtraction *Inverse operations | *Count in multiples of 6,7,9,25 and 1000 *Find 1000 more/less from any given number *Place value of 4-digit numbers *Order and compare numbers beyond 1000 *Representations of number including estimation *Round any number to the nearest 10,100, 1000 *Solving number problems *Count backwards through zero to include negative numbers *Recall multiplication and division facts for multiplication tables up to 12x12 | *Addition and Subtraction up to 4- digits using formal written methods of columnar addition and subtraction *Inverse operations *Addition and subtraction 2-step problems *Estimate, compare and calculate different measures, including money in £ and p *Interpret and represent discrete and continuous data using appropriate graphical methods, including bar charts and time graphs *Solve comparison, sum and difference problems using | *Count in multiples of 6,7,9,25 and 1000 *Recall multiplication and division facts for multiplication tables up to 12x12 *Multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers *Recognise and use factor pairs and commutativity in mental calculations *Solve addition and multiplication problems using distributive law and integer scaling. *Solve problems involving increasingly harder fractions to calculate quantities, | *Count in multiple of 1000 *Find 1000 more/less from any given number *Place value of 4-digit numbers *Order and compare numbers beyond 1000 *Representations of number including estimation *Round any number to the nearest 10,100, 1000 *Solving number problems *Convert between different units of measure *Read, write and convert time | *Count up and down in hundredths *Recognise and show, using diagrams, families of common equivalent fractions *Add and subtract fractions with the same denominator *Recognise and write decimal equivalents to ½½¾ *Divide a one or two-digit number by 10 and 100, identifying the value of the digits in the answer *Round decimals with one decimal place to the nearest whole number *Compare numbers with the same number |

*Addition and subtraction 2-step problems *Estimate, compare and calculate different measures, including money in £ and p *Interpret and represent discrete and continuous data using appropriate graphical methods, including bar charts and time graphs *solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

*Multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers *Recognise and use factor pairs and commutativity in mental calculations *Solve addition and multiplication problems using distributive law and integer scaling. *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 *Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. *Identify acute and obtuse angles and compare and order angles up to two right angles by size. *Identify lines of symmetry in 2D shapes presented in different orientations

information presented in bar charts, pictograms, tables and other graphs. *Count up and down in hundredths *Recognise and show, using diagrams, families of common equivalent fractions *Add and subtract fractions with the same denominator *Recognise and write decimal equivalents t0 1/4 1/2 3/4 *Divide a one or twodigit number by 10 and 100, identifying the value of the digits in the answer *Round decimals with one decimal place to the nearest whole number *Compare numbers with the same number of decimal places up to two decimals places *Convert between different units of measure (e.g. Kg to g)

and fractions to divide quantities, including non-unit fractions where the answer is a whole number *Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days *Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. *Describe positions on a 2D grid as coordinates in the first quadrant *Describe movements between positions as translations of a given unit to the left/right and up/down

between analogue and digital 12 and 24hour clocks *Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days *Interpret and represent discrete and continuous data using appropriate graphical methods, including bar charts and time graphs *Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. *Addition and Subtraction up to 4digits using formal written methods of columnar addition and subtraction *Inverse operations *Addition and subtraction 2-step problems

of decimal places up to two decimals places *Convert between different units of measure *Count in multiples of 6,7,9,25 and 1000 *Recall multiplication and division facts for multiplication tables up to 12x12 *Multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers *Recognise and use factor pairs and commutativity in mental calculations *Solve addition and multiplication problems using distributive law and integer scaling. *Multiply two-digit and three-digit numbers by a one-digit number using formal written lavout *Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions

| T | T | T | | |
|---|---|---|----------------------|----------------------------|
| | | | *Solving number | where the answer is a |
| | | | problems | whole number |
| | | | *Estimate, compare | *Solve problems |
| | | | and calculate | involving converting |
| | | | different measures, | from hours to minutes, |
| | | | including money in £ | minutes to seconds, |
| | | | and p | years to months, weeks |
| | | | *Solve simple and | to days |
| | | | measure and money | *Compare and classify |
| | | | problems involving | geometric shapes, |
| | | | fractions and | including quadrilaterals |
| | | | decimals to two | and triangles, based on |
| | | | decimals places | their properties and |
| | | | | sizes. |
| | | | | *Identify acute and |
| | | | | obtuse angles and |
| | | | | compare and order |
| | | | | angles up to two right |
| | | | | angles by size. |
| | | | | *Identify lines of |
| | | | | symmetry in 2D shapes |
| | | | | presented in different |
| | | | | orientations |
| | | | | *Complete a simple |
| | | | | symmetric figure with |
| | | | | respect to a specific line |
| | | | | of symmetry |
| | | | | *Measure and calculate |
| | | | | the perimeter of a |
| | | | | rectilinear figure |
| | | | | (including squares) in |
| | | | | cm and m |
| | | | | *Find the area of |
| | | | | rectilinear shapes by |
| | | | | counting squares |
| l | l | l | | <u>seaming squares</u> |

| Year 5 | *Read, write, order and |
|--------|-------------------------|
| | compare numbers up to |
| | <u>10 000 000 and</u> |
| | determine the value of |
| | each digit |
| | *Count forwards and |
| | backwards in steps of |
| | powers of 10 for any |
| | given number up to |
| | <u>1 000 000</u> |
| | *Round any number up |
| | to 1 000 000 to the |
| | nearest 10, 100, 1000, |
| | 10 000 and 100 000 |
| | *Solve number and |
| | place value problems |
| | *Multiply and divide |
| | whole numbers and |
| | those involving |
| | decimals by 10, 100, |
| | 1000 |
| | *Read and write |
| | decimal numbers as |
| | fractions |
| | *Recognise and use |
| | thousandths and relate |
| | them to tenths, |
| | hundredths and |
| | decimals equivalents |
| | *Round decimals with |
| | two decimal places to |
| | the nearest whole |
| | number and to one |
| | decimal place |
| | *Read, write, order and |

compare numbers with

*Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers *Multiply numbers up to 4 digits by a 1-digit number using a formal written method. *Multiply and divide numbers mentally drawing upon known facts *Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context *Multiply and divide whole numbers and those involving decimals by 10, 100, 1000 *Solve problems involving multiplication and division including using their knowledge of factors and multiples *Solve problems involving addition,

subtraction,

* Add and subtract

more than 4 digits

written methods.

of accuracy

and determine levels

*Solve addition and

problems in context

three decimal places

operations to solve

problems involving

notation including

*Solve comparison,

sum and difference

*Complete, read and

interpret information

in tables, including

*Multiply and divide

whole numbers and

decimals by 10, 100,

those involving

problems using

in a line graph

timetables

1000

*Solve problems

*Use all four

scaling

whole numbers with

*Identify multiples and factors, including finding all factor pairs including using formal of a number, and common factors of two Use rounding to check numbers answers to calculations *Know and use the vocabulary of prime numbers, prime factors and composite subtraction multi-step numbers *Solve problems involving multiplication involving number up to and division including scaling by simple fractions *Establish whether a number up to 100 is measure using decimal prime and recall prime numbers up to 19 *Multiply numbers up to 4 digits by a 1-digit number using a formal written method. information presented *Multiply and divide numbers mentally drawing upon known facts *Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context

*Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit *Count forwards and backwards in steps of powers of 10 for any given number up to 1 000 000 *Interpret negative numbers in context. count forwards and backwards with positive and negative whole numbers, including through zero *Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 *Solve number and place value problems *Multiply and divide whole numbers and those involving decimals by 10, 100, 1000 *Compare and order fractions whose denominators are all multiples of the same number

*Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers *Know and use the vocabulary of prime numbers, prime factors and composite numbers *Establish whether a number up to 100 is prime and recall prime numbers up to 19 *Multiply numbers up to 4 digits by a 1 or 2 digit number using a formal written method including long multiplication for 2digit numbers *Multiply and divide numbers mentally drawing upon known facts *Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context *Multiply and divide whole numbers and those involving

up to three decimal places *Solve problems involving number up to three decimal places *Convert between different units of metric measure *Solve problems involving converting between units of time * Add and subtract whole numbers with more than 4 digits including using formal written methods. Use rounding to check answers to calculations and determine levels of accuracy *Solve addition and subtraction multi-step problems in context *Use all four operations to solve problems involving measure using decimal notation including scaling *Solve comparison, sum and difference problems using information presented in a line graph *Complete, read and sides and angles interpret information in

multiplication and division and a combination of these, including understanding the meaning of the equals sign *Identify 3D shapes from 2D representations *Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles *Draw given angles and measure them in degrees *Identify angles at a point and one whole turn; angles at a point on a straight line and a ½ turn; other multiples of 90 degrees *Use the properties of rectangles to deduce related facts and find missing lengths and angles *Distinguish between regular and irregular polygons based on reasoning about equal

*Read and write decimal numbers as fractions *Recognise and use thousandths and relate them to tenths. hundredths and decimals equivalents *Compare and order fractions whose denominators are all multiples of the same number *Recognise mixed numbers and improper fractions and convert from one to the other *Recognise the percent symbol and understand that percent relates to number of parts per hundred and write percentages as a fraction with a denominator of 100 and as a decimal *Identify and name equivalent fractions of a given fraction, represented visually including tenths and hundredths

*Multiply and divide whole numbers and those involving decimals by 10, 100, 1000 *Recognise and use square numbers and cube numbers and the correct notation *Solve problems involving multiplication and division including using their knowledge of factors, multiples, squares and cubes *Solve problems involving addition, subtraction, multiplication and division and a combination of these. including understanding the meaning of the equals sign *Solve problems which require knowing percentage and decimal equivalents of ½ ¼ 1/5 2/5 4/5 and those with a denominator of a multiple of 10 or 25 *Use all four operations to solve

*Recognise mixed numbers and improper fractions and convert from one to the other *Add and subtract fractions with the same denominator and denominators that are multiples of the same number *Read and write decimal numbers as fractions *Recognise and use thousandths and relate them to tenths, hundredths and decimals equivalents *Round decimals with two decimal places to the nearest whole number and to one decimal place *Read, write, order and compare numbers with up to three decimal places *Solve problems involving number up to three decimal places *Recognise the percent symbol and understand that

decimals by 10, 100, 1000 *Recognise and use square numbers and cube numbers and the correct notation *Solve problems involving multiplication and division including using their knowledge of factors, multiples, squares and cubes *Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign *Identify and name equivalent fractions of a given fraction, represented visually including tenths and hundredths *Multiply proper fractions and mixed numbers by whole number, supported by materials and diagrams *Solve problems which require knowing percentage and decimal equivalents of ½ ¼ 1/5

| tables, including | *Read, write, order | problems involving | percent relates to | 2/5 4/5 and those with |
|-------------------|------------------------|--------------------------|----------------------|--------------------------|
| timetables | and compare numbers | measure | number of parts per | a denominator of a |
| | up to | *Identify 3D shapes | hundred and write | multiple of 10 or 25 |
| | 10 000 000 and | from 2D | percentages as a | *Use all four operations |
| | determine the value of | representations | fraction with a | to solve problems |
| | each digit | *Know angles are | denominator of 100 | involving measure |
| | *Count forwards and | measured in degrees: | and as a decimal | *Solve problems |
| | backwards in steps of | estimate and compare | *Convert between | involving converting |
| | powers of 10 for any | acute, obtuse and | different units of | between units of time |
| | given number up to | reflex angles | metric measure | *Understand and use |
| | 1 000 000 | *Draw given angles | *Solve problems | <u>approximate</u> |
| | *Interpret negative | and measure them in | involving converting | equivalences between |
| | numbers in context, | degrees | between units of | metric units and |
| | count forwards and | *Identify angles at a | time | common imperial units |
| | backwards with | point and one whole | * Add and subtract | such as inches, pounds |
| | positive and negative | turn; angles at a point | whole numbers with | and pints |
| | whole numbers, | on a straight line and a | more than 4 digits | *Use the properties of |
| | including through zero | ½ turn; other multiples | including using | rectangles to deduce |
| | *Read Roman | of 90 degrees | formal written | related facts and find |
| | numerals to 1000 (M) | *Use the properties of | methods. | missing lengths and |
| | and recognise years | rectangles to deduce | Use rounding to | angles |
| | written in Roman | related facts and find | check answers to | *Distinguish between |
| | numerals | missing lengths and | calculations and | regular and irregular |
| | *Round any number up | angles | determine levels of | polygons based on |
| | to 1 000 000 to the | *Distinguish between | accuracy | reasoning about equal |
| | nearest 10, 100, 1000, | regular and irregular | *Solve addition and | sides and angles |
| | 10 000 and 100 000 | polygons based on | subtraction multi- | *Identify, describe and |
| | *Solve number and | reasoning about equal | step problems in | represent the position |
| | place value problems | sides and angles | context | of a shape following a |
| | *Multiply and divide | *Identify, describe and | *Solve problems | reflection or |
| | whole numbers and | represent the position | involving number up | translation, using the |
| | those involving | of a shape following a | to three decimal | appropriate language, |
| | decimals by 10, 100, | reflection or | places | and know that the |
| | 1000 | translation, using the | *Use all four | shape has not changed. |
| | | appropriate language, | operations to solve | *Measure and calculate |
| | | and know that the | problems involving | the perimeter of |

| *Read and write | shape has not | measure using | composite rectilinear |
|------------------------|-----------------|-----------------------|------------------------|
| decimal numbers as | <u>changed.</u> | decimal notation | shapes in cm an m |
| fractions | | including scaling | *Calculate and compare |
| *Recognise and use | | *Solve problems | the area of rectangles |
| thousandths and relate | | involving converting | (including squares) |
| them to tenths, | | between units of | using standard units |
| hundredths and | | time | and estimate the area |
| decimals equivalents | | *Solve comparison, | of irregular shapes |
| *Round decimals with | | sum and difference | *Estimate volume and |
| two decimal places to | | problems using | <u>capacity</u> |
| the nearest whole | | information | |
| number and to one | | presented in a line | |
| decimal place | | graph | |
| *Read, write, order | | *Complete, read and | |
| and compare numbers | | interpret information | |
| with up to three | | in tables, including | |
| decimal places | | timetables | |
| *Solve problems | | | |
| involving number up to | | | |
| three decimal places | | | |
| *Convert between | | | |
| different units of | | | |
| metric measure | | | |
| *Solve problems | | | |
| involving converting | | | |
| between units of time | | | |
| | | | |

Year 6 do not follow the Rising Stars Programme of Study. Units of maths content are organised in line with the National Curriculum and taught both discretely and across domains to support fluency.

| Year 6 | *Read, write, order and | *Use the order of | *Divide numbers up to | *Describe positions on | |
|--------|-------------------------|-------------------------|-----------------------|--------------------------|--|
| | compare numbers up to | operations to carry out | 4 digits by a 2-digit | the full coordinate grid | The Summer term is used to revise and |
| | 10 000 000 and | calculations involving | number using the | *Draw and translate | consolidate all key skills from the Autumn and |
| | determine the value of | the four operations | formal written method | simple shapes on the | Spring term. |
| | each digit | | of long division and | coordinate plane and | |

*Round any whole number to a required degree of accuracy *Use negative numbers in context and calculate intervals across zero *Identify the value of each digit in numbers given to three decimal places *Multiply and divide numbers by 10, 100, 1000 giving answers up to 3 decimal places *Calculations with mixed operations and large numbers *Solve problems involving addition, subtraction, multiplication and division *Multiply numbers up to 4 digits by a 2-digit number using the formal written method of long multiplication *Multiply 1-digit numbers with up two decimal places by whole numbers *Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division and

*Identify common factors, common multiples and prime numbers *Recognise, describe and build simple 3D shapes, including making nets *Compare and classify geometric shapes based in on their properties and sizes *Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius *Calculate, estimate and compare volume of cubes and cuboids using standard units *Use common factors to simplify fractions *Use common multiples to express fractions in the same denomination *Compare and order fractions *Add and subtract fractions with different denominators and mixed numbers, using

interpret remainders as whole numbers, fractions, or by rounding, as appropriate for the context *Use, read, write and convert between standard units. converting measurements of length, mass and time, using decimal notation up to three decimal places *Convert between miles and kilometres *Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate *Solve problems which require answers to be rounded to specified degrees of accuracy *Recall and use equivalents between simple fractions, decimals and percentages. *Solve problems

involving the

reflect them in the axes *Use simple formulae *Generate and describe linear number sequences *Express missing number problems algebraically *Find pairs of numbers that satisfy an equation with two unknowns *Enumerate possibilities of combinations of two variables *Recognise when it is possible to use the formulae for area and volume of shapes *Solve problems involving similar shapes where the scale factor is known or can be found *Interpret and construct pie charts and line graphs and use these to solve problems *Calculate and interpret the mean as an average *Solve problems involving the relative

From teacher assessments from the Autumn and Spring term, year 6 teachers plan according to the needs of the year group.

| interpret remainders as | the concept of | calculation of | sizes of two quantities | |
|-------------------------|--|--|--|---|
| whole numbers, | equivalent fractions | percentages | where missing values | |
| fractions, or by | *Multiply simple pairs | *Associate a fraction | can be found by using | |
| rounding, as | of proper fractions, | with division and | integer multiplication | |
| appropriate for the | writing the answer in | calculate decimal | and division facts | |
| context | its simplest form | fraction equivalents | *Solve problems | |
| *Use written division | *Divide proper | *Draw 2D shapes using | involving unequal | |
| methods in cases where | fractions by whole | given dimensions and | sharing and grouping | |
| the answer has up to 2 | numbers | angles | using knowledge of | |
| decimal places | | *Compare and classify | fractions and multiples | |
| *Recognise shapes with | | geometric shapes | | |
| the same areas can | | based in on their | | |
| have different | | properties and sizes | | |
| perimeters and vice | | and find unknown | | |
| versa | | angles in any triangles, | | |
| *Calculate the area of | | quadrilaterals and | | |
| parallelograms and | | regular polygons | | |
| triangles | | *Recognise angles | | |
| | | where they meet at a | | |
| | | point, are on a straight | | |
| | | line, or at vertically | | |
| | | opposite and find | | |
| | | missing angles. | | |
| | | | | |
| | whole numbers, fractions, or by rounding, as appropriate for the context *Use written division methods in cases where the answer has up to 2 decimal places *Recognise shapes with the same areas can have different perimeters and vice versa *Calculate the area of parallelograms and | whole numbers, fractions, or by rounding, as appropriate for the context *Use written division methods in cases where the answer has up to 2 decimal places *Recognise shapes with the same areas can have different perimeters and vice versa *Calculate the area of parallelograms and *Multiply simple pairs of proper fractions, writing the answer in its simplest form *Divide proper fractions proper fractions *Multiply simple pairs of proper fractions, writing the answer in its simplest form *Divide proper fractions *Multiply simple pairs of proper fractions | whole numbers, fractions, or by rounding, as appropriate for the context *Use written division methods in cases where the answer has up to 2 decimal places *Recognise shapes with the same areas can have different perimeters and vice versa *Calculate the area of parallelograms and triangles equivalent fractions *Multiply simple pairs of proper fractions, writing the answer in its simplest form *Divide proper fractions by whole numbers *Divide proper fractions of proper fraction equivalents *Draw 2D shapes using given dimensions and angles *Compare and classify geometric shapes based in on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons *Recognise angles where they meet at a point, are on a straight line, or at vertically opposite and find | whole numbers, fractions, or by rounding, as appropriate for the context *Use written division methods in cases where the answer has up to 2 decimal places *Recognise shapes with the same areas can have different perimeters and vice versa *Calculate the area of parallelograms and triangles whole numbers, fractions, or by rounding, as appropriate for the context *Multiply simple pairs of proper fractions, writing the answer in its simplest form *Divide proper fractions by whole numbers *Draw 2D shapes using given dimensions and angles *Compare and classify geometric shapes based in on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons *Recognise angles where they meet at a point, are on a straight line, or at vertically opposite and find |