|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Term** | **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 8** |  | **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 8** | **Week 9** |
| **Autumn 1 – 8 Weeks** | **Autumn 2 – 9 Weeks** |
|  | **Pixl Paper Testing Window (Paper 1)** |  | **Start of** | **Pixl Y2 Testing Window (2018 Paper)** | **Y2 QLA Deadline** | **Y2 IFT Reports** |  |
|  |  | **Pixl Y3-5 Testing Window** |  |  |
|  | **Y6 QLA Deadline** | **Y6 IFT Reports** |  | **Y3-5 QLA Deadline** | **Y3-5 IFT Reports** | **Pixl Y6 Testing Window (2017 Paper)** | **Y6 QLA Deadline** | **Y6 IFT Reports** |  |
| **Autumn** | **Number & Place Value****3 Weeks** **Small Steps: 13****NCETM Spine:** [**1.9**](https://www.ncetm.org.uk/resources/50726) **(revisit Year 1 PV to 100)**[**2.1**](https://www.ncetm.org.uk/resources/52889) **(count in 2s, 5s, 10s)** | **Number: Addition & Subtraction****5 Weeks** **Small Steps: 19****NCETM Spine: Could refer back to** [**1.2**](https://www.ncetm.org.uk/resources/50719) **(for part-whole),** [**1.8**](https://www.ncetm.org.uk/resources/50725) **(support with tens and bonds to 100),** [**1.9**](https://www.ncetm.org.uk/resources/50726) **(TP 6 using PV for fact families)** [**1.7**](https://www.ncetm.org.uk/resources/50724) **(fact families inverse etc.)**[**1.14**](https://www.ncetm.org.uk/resources/51780) **(add and sub tens, 10 more less)**[**1.13**](https://www.ncetm.org.uk/resources/51779) **- (covers most small steps)**[**1.14**](https://www.ncetm.org.uk/resources/51780)**,** [**1.15**](https://www.ncetm.org.uk/resources/51781)[**1.16**](https://www.ncetm.org.uk/resources/51782) **(subtraction 2 digit 2 digit, bonds 10s and 1s)**[**1.11**](https://www.ncetm.org.uk/resources/51499) **(three addends)**[**2.1**](https://www.ncetm.org.uk/resources/52889) **(TP 2 bonds to 100 from Y3)** | **Consolidation/****Assessment** | **Number: Addition & Subtraction** **5 Weeks****See Aut 1** | **Measurement: Money****1 Week****Small Steps: 11****NCETM Spine: revisit** [**2.1**](https://www.ncetm.org.uk/resources/52889) **(TP 4-6)****Use Add & Sub skills from previous block and apply to money (y4 is next spine on money)** | **Number: Multiplication & Division****5 Weeks****Small Steps: 21****NCETM Spine:** [**2.2**](https://www.ncetm.org.uk/resources/52890)**,** [**2.3**](https://www.ncetm.org.uk/resources/52891) **(TP1)**[**2.5**](https://www.ncetm.org.uk/resources/52990) **(arrays)**[**2.3**](https://www.ncetm.org.uk/resources/52891) **(2x table),** [**2.4**](https://www.ncetm.org.uk/resources/52989) **(10 and 5 x table)****(**[**1.4**](https://www.ncetm.org.uk/resources/50721) **and** [**1.10**](https://www.ncetm.org.uk/resources/50727) **TP 3 if needed to refer back to y1 odd/even numbers)**[**2.6**](https://www.ncetm.org.uk/resources/52991) **- (TP 1-3 sharing and grouping) (TP 4 divide by 2, 5, 10)** | **Consolidation/****Assessment** |
| **Spring 1 – 6 Weeks** |  |  | **Spring 2 – 7 Weeks** |
|  | **Pixl Y1 Testing Window**  | **Y1 QLA Deadline** | **Y1 IFT Reports** |  |
|  | **Pixl Y3-5 Testing Window** |  | **Pixl Y2 Testing Window (2019 Paper)****Pixl Y6 Testing Window (2019 Paper)** | **Y2 & Y6 QLA Deadline** | **Y2 & Y6 IFT Reports** |  |
|  | **Pixl Y6 Testing Window (2018 Paper)** | **Y6 QLA Deadline** | **Y6 IFT Reports** | **Pixl Y3-5 Testing Window** | **Y3-5 QLA Deadline** | **Y3-5 IFT Reports** |  |
| **Spring** | **Consolidation** | **Statistics****2 weeks** **Small Steps: 6****NCETM Spine: some ideas in** [**1.12**](https://www.ncetm.org.uk/files/74114487/ncetm_mm_sp1_y2_se12_teach.pdf) **but this is mainly a focus on difference** | **Geometry: Properties of Shape** **2 Weeks****Small Steps: 12****NCETM Spine: N/A** | **Consolidation/****Assessment** |  | **Number: Fractions** **4 Weeks** **Small Steps: 12****NCETM Spine:** [**Key Stage 1**](https://www.ncetm.org.uk/resources/53655) **Fractions** | **Consolidation/****Assessment** |  |
|  **Summer 1 – 5 Weeks** |  |  | **Summer 2 – 5 Weeks** |
|  | **Pixl Y1 Testing Window** |  | **Pixl Y1 Testing Window** | **Y1 QLA Deadline** | **Y1 IFT Reports** |  |
|  | **Pixl Y3-5 Testing Window** |  | **Pixl Y3-5 Testing Window** | **Y3-5 QLA Deadline** | **Y3-5 IFT Reports** |
| **Summer** | **Measurement: Length & Height** **2 Weeks****Small Steps: 8****NCETM Spine:** [**1.1**](https://www.ncetm.org.uk/resources/50699) | **Geometry: Position & Direction****2 Weeks****Small Steps: 6****NCETM Spine: N/A** | **Consolidation & Problem Solving** |  | **Measurement: Time****2 Weeks****Small Steps: 9****NCETM Spine: N/A** | **Measurement: Mass, Capacity and Temperature****3 Weeks into 2 Weeks****Small Steps: 11****NCETM Spine: N/A** | **Consolidation/****Assessment** |

YEAR 2 – KS1 Mathematics Curriculum Map 2021-22

**Year 1 National Curriculum Objectives, White Rose Small Steps & NCTEM Spine Teaching Points**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Autumn** | **Number & Place Value – 3 Weeks** | **Addition & Subtraction - 5 Weeks** | **Measurement: Money - 1 Week** | **Number: Multiplication & Division –** **5 Weeks** |
| **National Curriculum Objectives** | * count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward
* recognise the place value of each digit in a two-digit number (10s, 1s)
* identify, represent and estimate numbers using different representations, including the number line
* compare and order numbers from 0 up to 100; use <, > and = signs
* read and write numbers to at least 100 in numerals and in words
* use place value and number facts to solve problems
 | * 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
* recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
* add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
* a two-digit number and 1s
* a two-digit number and 10s
* 2 two-digit numbers
* adding 3 one-digit numbers
* show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot
* recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
* Notes and guidance
 | * recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
* find different combinations of coins that equal the same amounts of money
* solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
 | * recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
* calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
* show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot
* solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts
 |
| **White Rose Small steps** | * Counting forwards and backwards within 20
* Tens and ones within 20
* Counting forwards and backwards within 50
* Tens and ones within 50
* Compare numbers within 50
* Count objects to 100 and read and write numbers in numerals and words
* Represent numbers to 100
* Tens and ones with a part-whole model
* Tens and ones using addition
* Use a place value chart
* Compare objects
* Compare numbers
* Order objects and numbers
 | * Fact families-addition and subtraction bonds to 20
* Check calculations
* Compare number sentences
* Related facts
* Bonds to 100 (tens)
* Add and subtract 1s
* 10 more and 10 less
* Add and subtract 10s
* Add by making 10
* Add a 2-digit number and 1-digit number – crossing ten
* Subtraction – crossing 10
* Subtract a 1-digit number from a 2-digit number – crossing ten
* Add two 2-digit numbers – not crossing ten – add ones and add tens
* Add two 2-digit numbers – crossing ten – add ones and add tens
* Subtract a 2-digit number from a 2-digit number – not crossing ten
* Subtract a 2-digit number from a 2-digit number – crossing ten – subtract tens and ones
* Find and make number bonds
* Bonds to 100 (tens and ones)
* Add three 1-digit numbers
 | * Recognising coins and notes
* Count money – pence
* Count money – pounds (notes and coins)
* Count money – notes and coins
* Select money
* Make the same amount
* Compare money
* Find the total
* Find the difference
* Find change
* Two-step problems
 | * Make equal groups
* Add equal groups
* Make arrays
* Recognise equal groups
* Make equal groups
* Add equal groups
* Multiplication sentences using the X symbol
* Multiplication sentences from pictures
* Use arrays
* Make doubles
* 2 times-table
* 5 times-table
* 10 times-table
* Make equal groups – sharing
* Make equal groups – sharing
* Make equal groups – grouping
* Make equal groups – grouping
* Divide by 2
* Odd & even numbers
* Divide by 5
* Divide by 10
 |
| **NCTEM Spine Teaching Points** | **1.9 – Composition of numbers 20 – 100**Build on multiples of ten, by introducing non-zero values in the ones place; apply the partitioning structure to these two-digit numbers, decomposing them into tens and ones.**2.1 – Counting, unitising and coins**Explore the concept of unitising by counting in units of two, five or ten; investigate how objects can be counted efficiently by counting in units other than one; apply unitising in the context of the low-denomination coins (1 p, 2 p, 5 p and 10 p). | **1.2 – Introducing ‘whole’ and ‘parts’: part-part-whole model** Introduce children to the concept of partitioning, which underpins many of the subsequent segments, and build towards use of the part–part–whole model.**1.8 – Composition of numbers: multiples of 10 up to 100**Explore multiples of ten, including counting in tens to 100; apply number facts within ten to addition and subtraction for multiples of ten**1.9 – Composition of numbers 20 – 100**Build on multiples of ten, by introducing non-zero values in the ones place; apply the partitioning structure to these two-digit numbers, decomposing them into tens and ones.**1.7 – Addition and subtraction: strategies within 10**Equip children with a range of useful strategies for addition within ten, including adding and subtracting zero and one, commutativity, adding and subtracting two to/from odd and even numbers, and doubling and halving.**1.13 – Addition and subtraction: Two-digit and single-digit numbers** Build on segments 1.8, 1.9 and 1.10 to equip children with useful strategies for addition and subtraction of a single-digit number to/from two-digit numbers.**1.14 – Addition and subtraction: Two-digit numbers and multiples of ten** Explore counting on, and back, in ten from any two-digit number; apply number facts within ten to the addition and subtraction of multiples of ten.**1.15 – Addition: Two-digit numbers and two-digit numbers** Build on segments 1.13 and 1.14 to equip children with useful strategies for addition of two or more two-digit numbers, partitioning two-digit numbers into tens and ones before calculation.**1.16 – Subtraction: Two-digit and two-digit numbers** Build on segments 1.13 and 1.14 to equip children with useful strategies for subtraction of one two-digit number from another, partitioning two-digit numbers into tens and ones before calculation.**1.11 – Addition and subtraction bridging 10**Apply the aggregation and augmentation structures of addition to three single-digit numbers, exploring commutativity and associativity, to work towards strategies for adding and subtracting across ten.**2.1 – Counting, unitising and coins**Explore the concept of unitising by counting in units of two, five or ten; investigate how objects can be counted efficiently by counting in units other than one; apply unitising in the context of the low-denomination coins (1 p, 2 p, 5 p and 10 p). | **2.1 – Counting, unitising and coins**Explore the concept of unitising by counting in units of two, five or ten; investigate how objects can be counted efficiently by counting in units other than one; apply unitising in the context of the low-denomination coins (1 p, 2 p, 5 p and 10 p). | **2.2 – Structures: Multiplication representing equal groups** Explore how objects can be arranged in equal groups, and how the number of groups and the size of the groups can be described; represent equally grouped objects with addition and multiplication expressions, connecting multiplication to repeated addition.**2.3 – Times-tables: Groups of 2 and commutativity (part 1)** Build up the two times table by combining children’s experience of counting in units of two and of representing equal groups; explore how, in a multiplication equation, the factors can appear in either order and the product remains the same.**2.5 – Commutativity (part 2), doubling and halving**Explore how one multiplication equation can have two different grouping interpretations (e.g., an equation from the two times table can be interpreted in terms of groups of two, or two equal groups); make connections between the two times table, doubling and halving.**1.4 – Composition of numbers 6 -10**Extend the partitioning structure to the numbers six to ten, explore the five-and-a-bit structure of the numbers, and introduce children to the concept of odd and even numbers.**1.10 – Composition of numbers 11-19**Explore the ten-and-a-bit nature of the numbers 11–19, using the partitioning structure; apply number facts within ten to addition and subtraction of single-digit numbers to/from the numbers 11–19.**2.6 – Structures: Quotitive and partitive division** Introduce the quotitive and partitive structures of division; skip count using the divisor, or use known multiplication facts, to find the quotient; generalise about the quotient when dividend = 0, dividend = divisor, or divisor = 1. |
| **Spring** | **Statistics – 2 Weeks** | **Geometry: Properties of Shape – 2 Weeks** | **Number: Fractions – 4 Weeks** |
| **National Curriculum Objectives** | * interpret and construct simple pictograms, tally charts, block diagrams and tables
* ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
* ask-and-answer questions about totalling and comparing categorical data
 | * identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line
* identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
* identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]
* compare and sort common 2-D and 3-D shapes and everyday objects
 | * recognise, find, name and write fractions 1/3 , 1/4 , 2/4 and 3/4 of a length, shape, set of objects or quantity
* write simple fractions, for example 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2
 |
| **White Rose Small steps** | * Make tally charts
* Draw pictograms (1-1)
* Interpret pictograms (1-1)
* Draw pictograms (2, 5 and 10)
* Interpret pictograms (2, 5 and 10)
* Block diagrams
 | * Recognise 2-D shapes and 3-D shapes
* Count sides on 2-D shapes
* Count vertices on 2-D shapes
* Draw 2-D shapes
* Lines of symmetry
* Sort 2-D shapes
* Make patterns with 2-D shapes
* Count faces on 3-D shapes
* Count edges on 3-D shapes
* Count vertices on 3-D shapes
* Sort 3-D shapes
* Make patterns with 3-D shapes
 | * Make equal parts
* Recognise a half
* Find a half
* Recognise a quarter
* Find a quarter
* Recognise a third
* Find a third
* Unit fractions
* Non-unit fractions
* Equivalence of ½ and 2/4
* Find three quarters
* Count in fractions
 |
| **NCTEM Spine Teaching Points** | **1.12 – Subtraction as difference** Introduce children to subtraction as difference, the third and final subtraction structure; review consecutive numbers, as well as consecutive odd/even numbers, in the context of difference. | **N/A** | **Key Stage 1 Fractions Spine:** **3.1 – The part-whole relationship** Name the fractions ‘one-half’, ‘one-quarter’ and ‘one-third’Year 1: Halving shapes or objectsYear 1: Find a quarter of a shape or object**3.2 – Unit fractions**Read and write the fraction notation \frac{1}{2}, \frac{1}{3} and \frac{1}{4}, and relate this to a fraction of a length, shape or set of objects. Find half of numbers. |
| **Summer** | **Measurement: Length & Height – 2 Weeks** | **Geometry: Position & Direction – 2 Weeks**  | **Consolidation & Problem Solving – 1 Week** | **Measurement: Time – 2 Weeks**  | **Measurement: Mass, Capacity & Temperature – 2 Weeks** |
| **National Curriculum Objectives** | * choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
* compare and order lengths, mass, volume/capacity and record the results using >, < and =
 | * Count to and across 100, forwards and backwards, beginning with 0 or 1 from any given number
* Count, read and write numbers to 100 in numerals
* Given a number, identify one more and one less
* Identify and represent numbers using objects and pictorial representations including the number line, more than, less than, most and least

  |  | * compare and sequence intervals of time
* 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
* know the number of minutes in an hour and the number of hours in a day
 | * choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
* compare and order lengths, mass, volume/capacity and record the results using >, < and =
 |
| **White Rose Small steps** | * Compare lengths and heights
* Measure lengths (1)
* Measure lengths (2)
* Measure length (cm)
* Measure length (m)
* Compare lengths
* Order lengths
* Four operations with lengths
 | * Describe position (1)
* Describe position (2)
* Describe movement
* Describe turns
* Describe movement and turns
* Making patterns with shapes
 | * See WR Problems of the Day
 | * Telling the time to the hour
* Telling the time to the half hour
* O’clock and half past
* Quarter past and quarter to
* Telling the time to 5 minutes
* Writing time
* Hours and days
* Find durations of time
* Compare durations of time
 | * Introduce weight and mass
* Measure mass
* Compare mass
* Measure mass in grams
* Measure mass in kilograms
* Introduce capacity and volume
* Measure capacity
* Compare volume
* Millilitres
* Litres
* Temperature
 |
| **NCTEM Spine Teaching Points** | * 1. **– Comparison of quantities and measures**

Explore the relationship between numbers and introduce children to the important concept of equivalence; focus on the correct use of comparative language, as well as use of mathematical symbols (<, = and >). | **N/A** | **N/A** | **N/A** | **N/A** |