

Black – Main content to be taught

Italic – Daily fluency objectives

Purple – Challenge objectives

Learning objectives are not listed in a specific order and may be taught more than once to support learning progression.

HCAT Maths Year on a Page

Year 3 – 2025/2026



Autumn Term 1			
Week 1 01/09/25 3-day week	Number & Place Value	To count in multiples of 3 from 0. To count in multiples of 4 and 8 from 0. To count in multiples of 50 and 100 from 0. To recognise the place value of each digit in a 3-digit number. To partition 2 and 3-digit numbers. To find 10 more and 10 less than a given number. To find 100 more and 100 less than a given number. To compare and order numbers from 0 up to 1000 using the symbols >, < and = To read and write numbers to at least 1000 in numerals and words. To identify and represent numbers using different representation, including a number line up to 1000. <i>To partition a 3-digit number into different combinations into hundreds, tens and ones.</i> <i>To use place value and number facts to solve problems using larger numbers to 1000.</i> <i>To fluently count in 3s</i>	
Week 2 08/09/25			
Week 3 15/09/25			
Week 4 22/09/25	Addition	To add ones to a three-digit number mentally. To add tens to a three-digit number mentally. To add hundreds to a three-digit number mentally. To use understanding of place value and partitioning to solve problems with increasing large numbers (up to three-digits). To use formal written method for addition to add numbers with up to three-digits (carrying tens and hundreds). <i>To use the inverse operation to check answers.</i> <i>To fluently count forwards in multiples of 4.</i>	
Week 5 29/10/25	Subtraction	To subtract ones from a three-digit number mentally. To subtract tens from a three-digit number mentally. To subtract hundreds from a three-digit number mentally. To use understanding of place value and partitioning to solve problems with increasing large numbers (up to three-digits). To use formal written method for subtraction to subtract numbers with up to three-digits (including exchanging). <i>To use the inverse operation to check answers.</i> <i>To fluently count forwards in multiples of 4.</i>	
Week 6 06/10/25	Multiplication	To recall and use multiplication facts for 3s. To recall and use multiplication facts for 4s. To use and understand repeated addition and arrays to multiply single digit numbers. To use mental strategies to multiply 2-digit numbers by 1 digit (using partitioning). <i>To use formal written method for short multiplication.</i> <i>To fluently count backwards in multiples of 4.</i>	
Week 7 13/10/25	Division	To recall and use division facts for 3s. To recall and use division facts for 4s. To use practical and written methods for division involving grouping and sharing. To use remainders when grouping and sharing (see calculation policy). To use reliable strategies to divide 2-digit numbers by 1-digit numbers (e.g. $88 \div 4 =$) <i>To use formal written method of short division.</i> <i>To fluently count forwards and backwards in multiples of 4.</i>	
Week 8 20/10/24 3-day week	Statistics	To interpret data using bar charts. To present data using bar charts. To solve one-step word problems using information presented in bar charts. <i>To interpret data in many contexts.</i> <i>To fluently count in 3s and 4s from any given number forwards.</i>	
October Half Term			

Autumn Term 2			
Week 1 09/11/25	Measures: Money	To become fluent in recognising the value of coins. To add amounts of money. To subtract amounts of money. To add and subtract amounts of money to give change To add and subtract mixed units (£ and p) <i>To fluently recall the number of days in each month, year and leap year.</i>	
Week 2 10/11/25	Measures: Time	To tell and write the time from an analogue clock to the nearest five minutes. To know the number of seconds in a minute and apply this to solve problems. To know the number of days in each month, year and leap year. To use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight. To know and use Roman numerals from 1 to 12. To know the number of seconds in a minute and apply this to solve problems. <i>To fluently recall the number of days in each month, year and leap year.</i>	
Week 3 17/11/25	Autumn Assessment Week		
Week 4 24/11/25	Fractions	To recognise that tenths arise from dividing an object into 10 equal parts. To count up and down in tenths. To divide objects and quantities by 10. To recognise, find and write fractions of a discrete set of objects. To recognise and use fractions as numbers (e.g. 1/3 picture representation and 2/5 with picture representation). To recognise and show equivalent fractions with small denominators. To add fractions with the same denominator within 1 whole. To subtract fractions with the same denominator within 1 whole. To compare and order unit fractions and fractions with the same denominator. <i>To fluently count forwards in multiples of 8.</i>	
Week 5 01/12/25			
Week 6 08/12/25	Geometry: Properties of shape	To recognise angles as a description of a turn. To identify and explore right angles (2 right angles = ½ turn). To identify angles are greater or less than a right angle. To identify horizontal and vertical lines. To identify pairs of perpendicular and parallel lines. To identify and describe 2D shapes and their properties. To draw 2D shapes with given properties. To recognise and describe 3D shapes and their properties. To connect decimals and rounding to drawing and measuring straight lines in centimetres in a variety of contexts. <i>To fluently count backwards in multiples of 8.</i>	
Week 7 15/12/25			
Christmas End of Term			

Spring Term 1			
Week 1 05/01/26	Place Value	To count in multiples of 4, 8, 50 and 100 from 0. To find 1, 10, 100 more or less than a given number. To partition a 3-digit number into different combinations into hundreds, tens and ones. To use place value and number facts to solve problems using larger numbers up to 1,000. To solve practical problems involving measures. To fluently count in multiples of 50 and 100.	
Week 2 12/01/26	Addition & Subtraction	To fluently use formal written method for addition and subtraction to add numbers up to three-digits (tens and hundreds). To add a near multiple of ten to a two-digit number (calculation policy). To use inverse and estimation to check answers to calculations. To use formal written method for addition and subtraction applying these strategies to solve worded problems (including carrying and exchanging). To use strategies to solve addition and subtraction missing number problems. To find a small difference by counting up (calculation policy). To solve addition and subtraction problems in the context of length, mass and temperature. To fluently recall 3s and 4s	
Week 3 19/01/26			
Week 4 26/01/26	Multiplication and Division	To recall and use multiplication facts for 8s. To make links to doubling and the 2, 4 and 8 multiplication tables. To apply the formal written method for multiplication using multiplication calculations (shown in brackets) to support understanding – see calculation policy video. To use and understand the value of the equals sign (e.g. $6 \times 2 = 12$; $12 = 6 \times 2$) To use formal written methods of short division. To use inverse and estimation to check answers to calculations. To use multiplication and division facts to create fact families. To solve missing number problems involving multiplication and division problems. To use efficient mental methods when solving multiplication and division calculations. To solve problems including positive integer scaling problems. To solve problems including correspondence problems. To fluently recall 3s and 4s	
Week 5 02/02/26			
Week 6 09/02/26	Measurement: Perimeter	To measure and compare lengths (m, cm, mm) using an appropriate tool. To measure the perimeter of simple 2d shapes (mm, cm, m). To solve problems involving perimeter and measure. To use scaling by integers. To use mixed units when finding the perimeter of 2d shapes. To fluently recall 2, 5, 10. 3.4.8 (mixed)	
February Half Term			



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Year 3 – 2025/2026



Spring Term 2			
Week 1 23/02/26	Fractions	To recognise, find and write fractions of a discrete set of objects. To compare and order unit fractions and fractions with the same denominator. To add and subtract fractions with the same denominator within one-whole through a variety of complex problems. To solve problems linking to fractions of a shape. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 2 02/03/26	Geometry	To make 3d shapes using modelling materials. To recognise 3d shapes in different orientations and describe them. To describe the properties of shape including symmetry. To describe the properties of shape including acute and obtuse for angles – greater or less than a right angle. To connect decimals and rounding to drawing and measuring straight lines in centimetres in a variety of contexts. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 3 09/03/26	Measure: Length/Height Mass/Weight	To measure and compare lengths (m/cm/mm). To add and subtract lengths (m/cm/m) To measure and compare mass (kg/g) To add and subtract mass (kg/g) To measure and compare volume/capacity (l/ml) To add and subtract volume/capacity (l/ml) To measure using appropriate tools and simple equivalents of mixed units. To read and interpret a variety of measuring scales.	
Week 4 16/03/26		To compare measures including simple scaling by integers. To solve problems involving measure linking to the four operations. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 5 23/03/26	Statistics	To interpret data using pictograms. To present data using pictograms. To interpret data using tables. To present data using tables. To solve one-step and two-step problems using information presented in scaled bar charts, pictograms and tables. To use strategies to analyse and interpret data. To fluently recall 2,5,10.3.4,8 (mixed)	
Easter End of Term			

Summer Term 1			
Week 1 13/04/26	Measure: Time	To tell and write the time from an analogue clock to the nearest minute. To compare durations of events. To use analogue and digital 12-hour clocks. To use 12 hour and 24-hour clocks, using the language of a.m. and p.m. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 2 20/04/26	Addition	To fluently add numbers mentally including: a three-digit number and ones, a three-digit number and tens, and a three-digit number and one hundreds. To solve problems with addition applying their increasing knowledge with mental and written methods. To use strategies to solve addition problems in the context of money. To use knowledge of place value to solve missing number problems. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 3 27/04/26	Subtraction	To fluently subtract numbers mentally including: a three-digit number and ones, a three-digit number and tens, and a three-digit number and one hundreds. To solve problems with subtraction applying their increasing knowledge with mental and written methods. To use strategies to solve subtraction problems in the context of money. To use knowledge of place value to solve missing number problems. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 4 04/05/26 4-day week	Place Value	To read and write numbers up to 1000 in numerals and words. To compare and order numbers up to 1000, making links to measure. To apply partitioning knowledge to identify missing numbers in a number sentence,. To solve number problems linked with with place value. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 5 11/05/26	Multiplication & Division	To use place value knowledge by multiplying by 10. To use place value knowledge by multiplying by 100. To solve problems including positive integer scaling problems. To solve problems including correspondence problems. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 6 18/05/26	Measurement: Money	To add and subtract amounts of money to give change using pounds and pence. To solve money problems using the four operations. To solve money problems with multiple answers (e.g. Which coins could be given as the change – write more than one way) To fluently recall 2,5,10.3.4,8 (mixed)	
Spring Bank Half Term			

Summer Term 2 – Consolidating all key concepts, identifying opportunities to draw upon other areas of maths and develop mastery.			
Week 1 01/06/26	Combining Concepts	To combine time and addition and subtraction to compare duration. To know the number of days in each month, year and leap year. To use knowledge of place value to solve missing number problems. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 2 08/06/26	Summer Assessment Week		
Week 3 15/06/26	Combining Concepts	To solve problems linking to fractions of a shape. To add and subtract fractions with the same denominator within one-whole through a variety of complex problems. To find a fraction of a number. To connect tenths to place value, decimal measures and to division by 10. To understand unit and non-unit fractions as numbers on a number line and deduce relations between them. To solve multi-step problems using fractions and four operations. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 4 22/06/26			
Week 5 29/06/26	Combining Concepts	To connect decimals and rounding to drawing and measuring straight lines in centimetres in a variety of contexts. To identify horizontal and vertical lines and pairs of perpendicular and parallel lines. To use knowledge of addition and subtraction to solve missing number perimeter problems. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 6 06/07/26	Addressing Misconceptions following recent assessments	Use of trackers and QLA and teacher assessment of pupils within your class to address gaps in learning. Relevant learning objectives need to be taken from this document depending on what your pupils need and used each lesson. Use of time to ensure that pupils have the fundamentals for the next academic year. To fluently recall 2,5,10.3.4,8 (mixed)	
Week 7 13/07/26			
Summer Holidays End of Term			



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Year 3 – Curriculum Guide – Place Value



National Curriculum Objectives:

Pupils should be taught to:

- Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
- Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
- Compare and order numbers up to 1000
- Identify, represent and estimate numbers using different representations
- Read and write numbers up to 1000 in numerals and in words
- Solve number problems and practical problems involving these ideas.

Misconceptions:

- Misunderstanding the values of each column.
- Confusion about the place value of numbers - Difficulties are especially apparent when ordering numbers such as 212 and 221. Failure to understand that the position of the numeral gives it the value.
- Not understanding the concept of zero as a place holder.
- Mixing up < and >
- Misunderstanding a calculation when the = sign is at the beginning eg. $56 = 50 + 6$

Mathematical Language:

Numbers to 100, zero, count, before, after, next, more, less, many, few, fewer, greater, equal to, the same as, value, odd, even, pair, ones, tens, hundreds, digits, figures, compare, larger, largest, smaller, smallest, between, above, below, least, partition, recombine, thousand, place holder

Development steps:

NOTE: these steps are not necessarily listed in order, nor are they the focus for a whole lesson in some cases. They are listed to support elements that need to be explored at some point.

- Hundreds
- Counting in 1's within 1000
- Identifying 3 digit numbers on a numberline.
- Represent numbers to 1000.
- Hundreds tens and ones.
- Partitioning hundreds, tens and ones. Partitioning in different ways. Eg. $456 = 400 + 50 + 6$, $390 + 60 + 6 = 456$, $200 + 200 + 25 + 25 + 6 = 456$ etc
- Compare objects, values, numbers and various representations of numbers to 1000, using <, > =
- Order numbers
- Count in 100s
- Count in 50's
- Count in 3's, 4's 8's
- Finding 1 and 10 more and 1 and 10 less of a number up to 1000
- Finding 100 more and less of a number up to 1000

Other links:

- Numerals on clocks and calendars.
- Counting the days in a week/month/months in the year etc.
- Counting in different measurements, eg cm,
- Counting in 5ps and 2ps.
- Recognising numbers on money and finding their value on a number line.
- Using a number line/ruler to read numbers and measure length.
- Estimating the number of objects
- Ordering a range of measures – ordering scale measurements, ordering money amounts, tens and one representations
- Partitioning - using 10ps and 1ps to represent tens and ones as well as base 10/straws etc.
- Counting/sorting shapes
- Odd and even measure amounts - money, measures
- Counting in tens – 10p, 10cm

Contexts/resources:

- Theatre/event tickets/prices
- Temperature
- Money
- Measurements
- Games - points (1, 10, 100 points)
- Maths stories with a place value theme:
 - A place for Zero by Angeline Sparagna LoPresti
 - One Hundred hungry ants by Elinor J Pinczes
 - Place value by David A Adler

White Rose Schemes of Learning

<https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/>

NCTEM

https://www.ncetm.org.uk/public/files/23305581/Mastery_Assessment_Y3_Low_Res.pdf

NRICH

<https://nrich.maths.org/content/id/13291/KS2CurriculumLinkedtoNRICH.pdf>



HCAT Maths Year on a Page

Year 3 – Curriculum Guide – Addition & Subtraction



<u>National Curriculum Objectives:</u> Pupils should be taught to: • Add and subtract numbers mentally, including: • a three-digit number and ones • a three-digit number and tens • a three-digit number and hundreds • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • Estimate the answer to a calculation and use inverse operations to check answers • Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	<u>Misconceptions:</u> • Inaccurate counting skills • Misunderstands meaning of ‘one more’ and ‘one less’ • Does not relate the combining of groups of objects to addition and/or does not interpret the counting of all of the objects as an answer to the question • Is not confident about when to stop counting when taking away (subtracting) in answer to the question ‘How many are left?’ • Has difficulty with identifying doubles and adding a small number to itself, for example $2 + 2$, to make twice as many. • Makes unequal groups and is unable to compare the groups. • Has difficulty with counting reliably in tens from a multiple of ten. • When counting on, putting the ‘number in your head’ on your finger. • Misreading and understanding number sentences, especially in fact families E.g. knowing $7+3 = 10$, therefore assuming $10 + 3 = 7$	<u>Mathematical Language:</u> Plus, add, total, altogether, together, how many more, how many less, dropped, subtract, minus, column, exchange, hundreds, tens, ones, pound, pence, left over, change (money), subtraction, inverse
<u>Development steps:</u> NOTE: these steps are not necessarily listed in order, nor are they the focus for a whole lesson in some cases. They are listed to support elements that need to be explored at some point. • Add and subtract multiples of 100 • Add and subtract 3 digit and 1s not crossing ten. • Add and subtract 3 digit and 1s crossing ten. • Expanded Column method moving to column method to:- • Add and subtract 3 digit and 2 digit not crossing ten. • Add and subtract 3 digit and 2 digit not crossing ten. • Add and subtract 2 3 digit numbers not crossing ten. • Add and subtract 2 3 digit numbers crossing ten. • Add and subtract 3 digit numbers and multiple of ten and hundred. • Efficient and effective mental strategies for the above. • Spot the pattern – making it explicit. • Adding and subtracting near multiples of 10 Eg. Add 9, 19, 29/11, 21, 31 etc. • Inverse operations, including missing numbers and digits • Addition and subtraction problems • Choosing the appropriate and efficient methods or strategy for addition and subtraction and explain reason for choice. • Round to estimate an answer.	<u>Other links:</u> • Place value links • Eg. What is the total of $400 + 30 + 2$ and 4 hundreds and 3 tens. • Adding and Subtracting money amounts. • Add and subtract measures. • Apply knowledge of converting measures (Kg/g, L/ml, m/cm/mm). Eg to add and subtract 1m and 20cm + 131cm • Statistics link – how many more/less • Links to algebra (symbols representing numbers) • Geometry – perimeter of shapes • Addition and subtraction within calendar • Addition and subtraction of time (mins, hours etc) • Addition and subtraction of Roman numerals using I X and V.	<u>Contexts/resources:</u> • Menus • Shopping • Length of items. • Use of children’s interests. <u>Resources</u> NCTEM tasks and activities https://www.ncetm.org.uk/public/files/23305607/Mastery_Assessment_Y3_High_Res.pdf <u>NRICH</u> https://nrich.maths.org/content/id/13291/KS2CurriculumLinkedtoNRICH.pdf <u>White Rose Materials</u> https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/schemes-of-learning/primary-sols/



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Year 3 – Curriculum Guide – Multiplication & Division



<u>National Curriculum Objectives:</u> Pupils should be taught to: - Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables - Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods - Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	<u>Misconceptions:</u> - Lack of understanding vocabulary. - Linking up multiplying by 2 and doubling. - Linking up that halving is dividing by 2 - Understanding that the number gets bigger when multiplying and smaller when dividing - Understanding what an equal group is - Recognising that multiplying is the same as repeated addition. - Ensure children understand the correct inverse operations. For example $3 \times 4 = 12$ generates a whole lot of sentences and symbolic expressions: Three lots of four make twelve $4 \times 3 = 12$ Four lots of three make twelve. There are three groups of four in twelve $12 \div 4 = 3$ There are four groups of three in twelve $12 \div 3 = 4$ If you share twelve things between three people they will have four things each $12 \div 3 = 4$ If you share twelve things between four people they will have three things each $12 \div 4 = 3$	<u>Mathematical Language:</u> Numbers, grouping, sharing, multiply, halve, fractions, equal, groups, divide, lots of, groups of, once, twice, three times, multiples, odd, even, count in twos, fives, tens, on from, back from, How many times? Multiple of, times, multiply, multiply by, repeated addition, array, row, column, equal groups of.
<u>Development steps:</u> NOTE: these steps are not necessarily listed in order, nor are they the focus for a whole lesson in some cases. They are listed to support elements that need to be explored at some point. • Multiplication- equal groups • Multiply by 3 • Divide by 3 • The three times table • Multiply by 4 • Divide by 4 • The four times table • Multiply by 8 • Divide by 8 • The eight times table • Write and calculate mathematical statements for multiplication and division using the multiplication tables they know (above) • Solve problems, including those with missing numbers, including both multiplication and division.	<u>Other links:</u> • When shopping find quantities in multiple purchases, sales prices, sharing costs. • Links to conversion. Converting units of measure (10 lots of 100ml= 1L) • Statistics- Interpreting and evaluating data, calculating amounts from pie charts and pictograms. • Addition and subtraction • Links to algebra e.g. $3 \times ? = 12$ is the same as $3 \times y = 12$ • Multiplying shapes • Multiplying and dividing time (multiplying minutes and hours- e.g. 1 book is 10 minutes, how long would it take you to read 7 books?) (It takes 10 hours to fill a quarter of a swimming pool. How long would it take to fill the whole pool?) • Bar model	<u>Contexts/resources:</u> • Shopping- multiplying the price of items by how many are needed. Links to money and change. • Building/ gardening. • Time-using the days of the week to divide by. • Use a range of statistics/ data people, as a context for multiplying and dividing. • Sticks, Numicon, Tens frame, Number lines, base 10, number flashcards, coins counters, bead strings, counting sticks, dice. <u>White Rose Schemes of Learning</u> https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/ <u>NCETM</u> https://www.ncetm.org.uk/public/files/23305594/Mastery_Assessment_Y1_Low_Res.pdf <u>NRICH</u> https://nrich.maths.org/content/id/13291/EYFSKS1CurriculumLinkedtoNRICH.pdf



HCAT Maths Year on a Page

Year 3 – Curriculum Guide – Fractions, Decimals and Percentages



National Curriculum Objectives:

Pupils should be taught to:

- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- Recognise and use fractions as numbers: unit fractions and non-unit 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 [for example, $\frac{1}{2} + \frac{1}{2} = 1$]
- Compare and order unit fractions, and fractions with the same denominators
- Solve problems that involve all of the above

Misconceptions:

- Knowing that $\frac{1}{2}$ is not always larger than $\frac{1}{4}$ - it depends on the value of the whole.
- Children struggle moving on from finding a fraction of a shape to the more abstract concept of finding a fraction of a number.
- Reinforce children's understanding of what a fraction actually is and how we find fractions (equal parts of the whole)
- Demonstrate finding a fraction of number using a set of objects (Multilink/ counters/Smarties!!)
- Children can find it difficult to understand that fractions can have the same value despite having different denominators (e.g. $\frac{2}{4}$ and $\frac{3}{6}$) Ensure practical equipment is used to explore this.

Mathematical Language:

Fraction, equal, part, whole, half, quarter, third, fifth, sixth, seventh, eighth, ninth, tenth, share, divide, unit fractions, non-unit fractions, equivalent, numerator, denominator, greater than, less than

Development steps:

NOTE: these steps are not necessarily listed in order, nor are they the focus for a whole lesson in some cases. They are listed to support elements that need to be explored at some point.

- Develop children's understanding of the difference between unit and non-unit fractions
- Making a whole
- Explore tenths- Count up and down in tenths; recognise that tenths arise from dividing an object (a whole) into 10 equal parts and in dividing one-digit numbers or quantities by 10
- Explore tenths as a decimal (equivalence to tenths as fractions)
- Fractions on a number line- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
- Fractions of a set of objects- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
- Solve problems involving unit and non-unit fractions
- Equivalent fractions- Recognise and show, using diagrams, equivalent fractions with small denominators.
- Compare fractions and order fractions with the SAME denominator.
- Add and subtract fractions with the same denominator within one whole [for example, $5 \frac{7}{10} + 1 \frac{7}{10} = 6 \frac{7}{10}$]

Other links:

- Make links to division – sharing into equal groups.
- Make links to double and half.
- Counting in fractions using a counting stick.
- $\frac{1}{3}$, $\frac{2}{3}$ 1 whole, 1 whole and $\frac{1}{3}$, etc.
- Links to measures (capacity) finding fractions of amounts using fractions with small denominators e.g finding $\frac{3}{4}$ of 100ml.
- Fractions of a journey (miles and km)
- Finding fractions of money amounts and measures – convert measures. Eg $\frac{1}{4}$ of £1000, $\frac{1}{2}$ L, $\frac{3}{4}$ of a metre.
- Geometry – fractions of shapes including shapes on squared paper Eg. Shade $\frac{1}{3}$
- Half turn and quarter turn (feed into PE)
- Links to time- Clocks – half past, quarter past, quarter to
- Word problems involving fractions

Contexts/resources:

- Fractions of shapes, pizza's cakes, chocolate/sweets/fruit food items.
- Using images to explore fractions. Eg. $\frac{1}{4}$ wearing glasses etc.
- Fractions of length/measures/journeys.
- Maths stories that look at fractions e.g: give me half
- <https://www.youtube.com/watch?v=hVaxiJB6Fls>
- Practically finding half of measures eg. 20cm string – cutting half and quarter.

White Rose Schemes of Learning

<https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/>

NCTEM

https://www.ncetm.org.uk/public/files/23305594/Mastery_Assessment_Y2_Low_Res.pdf

NRICH

<https://nrich.maths.org/content/id/13291/EYFSKS1CurriculumLinkedtoNRICH.pdf>



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Year 3 – Curriculum Guide – Geometry



<u>National Curriculum Objectives:</u> Pupils should be taught to: • Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • Recognise angles as a property of shape or a description of a turn • Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	<u>Misconceptions:</u> • Names of the different shapes – vocabulary • Understanding of what 2D and 3D shapes are • Irregular and regular shapes • Not all triangles are equilateral • Counting the same side more than once (need to mark off) • Do all four sided shapes look the same? • The difference between horizontal and vertical	<u>Mathematical Language:</u> Acute, obtuse, right angle, angles, turn, degrees, horizontal, vertical, parallel, perpendicular, greater than, smaller than, regular, irregular,
<u>Development steps:</u> NOTE: these steps are not necessarily listed in order, nor are they the focus for a whole lesson in some cases. They are listed to support elements that need to be explored at some point. • Turns and angles • Right angles in shapes • Comparing angles • Draw accurately • Horizontal and vertical • Parallel and perpendicular lines • Recognise and describe 2d shapes • Recognise and describe 3d shapes • Make 3d shapes	<u>Other links:</u> • Multiplying – E.g, counting the amount of sides of 3 triangles.. If there are two squares, how many sides are there altogether? 2 squares = 4 sides x 2 • Adding the sides of all the shapes and length of multiple shapes joined together • Subtracting – can you take away 4 squares? IF I take away one side, what shape would I have? • Outdoor learning – finding horizontal and vertical lines • Measuring – the size of shapes • Fractions – how many red triangles out of them all? Fractions of shapes. • Statistics – pictograms using shapes • Exploring difference between length of shapes/shape measures. • Symmetry- create symmetrical shapes with given properties, eg an odd number of red squares, multiple of 5 of green squares. Half the number of blue than green. Etc. • Algebra – using shapes to represent numbers.	<u>Contexts/resources:</u> • Sorting games/top trumps with angles. • Sorting shapes using different equipment- link to statistics. • PE/ follow a set of instructions to find treasure - turns • https://www.youtube.com/watch?v=2cg-Uc556-Q&list=PLlaXSL5tFvIBK2vg5MRHWqap0IX1xafo8 <u>White Rose Schemes of Learning</u> https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/ <u>NCETM</u> https://www.ncetm.org.uk/public/files/23305594/Mastery_Assessment_Y2_Low_Res.pdf <u>NRIC</u> https://nrich.maths.org/content/id/13291/EYFSKS1CurriculumLinkedtoNRICH.pdf



HCAT Maths Year on a Page

Year 3 – Curriculum Guide – Measures



National Curriculum Objectives:

Pupils should be taught to:

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- Measure the perimeter of simple 2-D shapes
- Add and subtract amounts of money to give change, using both £ and p in practical contexts
- Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
- Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight
- Know the number of seconds in a minute and the number of days in each month, year and leap year
- Compare durations of events [for example to calculate the time taken by particular events or tasks].

Misconceptions:

- Understanding that the point of measure is the line and not the space.
- Understand how to use equipment correctly.
- Not recording the correct unit.
- Understanding that there are 60 minutes in 1 hours and not 100.
- Misunderstanding size for weight/ height for capacity.
- When measuring ensure the ruler is lined up at the correct starting point.

Mathematical Language:

Full, half full, empty, holds, container, weigh, weighs, balances, heavy, heavier, heaviest, light, lighter, lightest, scales, time, days of the week, seasons, day, week, month, year, weekend, birthday, morning afternoon, evening, night, midnight, Bedtime, dinnertime, playtime, Today, yesterday, tomorrow, Before, after, Next, last

Now, soon, early, late, Quick, quicker, quickest, quickly, fast, faster, fastest, slow, slower, slowest, slowly, old, older, oldest, new, newer, newest, takes longer, takes less time, Hour, o'clock, half past, Clock, watch, hands, Always, never, often, sometimes, usually, Once, twice, First, second, third, etc. Estimate, close to, about the same as, just over, just under, Too many, too few, not enough, enough, Length, width, height, depth, Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest

Low, wide, narrow, deep, shallow, thick, thin, Far, near, close Metre, ruler, metre stick, Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, dear(er), costs more, costs less, cheaper, costs the same as, Total.

Development steps:

NOTE: these steps are not necessarily listed in order, nor are they the focus for a whole lesson in some cases. They are listed to support elements that need to be explored at some point.

- Measure length
- Equivalent lengths (cm and m then mm and cm)
- Compare lengths
- Add and subtract lengths
- Measure perimeter
- Calculate perimeter
- Pounds and pence
- Convert pounds and pence
- Add and subtract with money
- Give change
- Months and years
- Hours and days
- Telling time to five minutes
- AM and PM
- 24h clock
- Finding duration
- Start and end times
- Measuring time in seconds

Other links:

- Place Value – reading numbers on a measuring aid, ordering units, writing the time
- Place Value – recognising thousands, hundreds tens and units in measurements.
- Using < > and = to compare measures
- Counting in measures. Eg. Cm, 5p, 10p, minutes, g/kg etc. Discuss crossing boundaries eg. cm to m etc.
- Counting in fractions of measures.
- Addition and subtraction of months/days in calendar maths
- Addition/Subtraction of measures Eg. add up the weight of luggage to check it is within baggage allowances/ how many shelves can be made out of a given length of wood?
- Fractions – language of half, quarter, three quarters. Converting fraction measures. Eg. $2\frac{1}{2}$ Kg = 2, 500g.
- Statistics – graphs showing measurements.
- Calculating difference between measurements.
- Doubling/halving measurements
- Measuring the length of shape sides.
- Multiplication – clock count round in multiples of 5's.
- Sorting odd and even measurements.
- Multiplying and division of measures. Eg. dividing string into equal lengths/multiplying multiple lengths as plants grow etc.

Contexts/resources:

- Shopping- money and change
- Weighing ingredients for baking using metric units of measure.
- Rulers, meter sticks, tape measures, a variety of containers, clock, money, calendar, trundle wheel

White Rose Schemes of Learning

<https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/>

NCTEM

https://www.ncetm.org.uk/public/files/23305594/Mastery_Assessment_Y2_Low_Res.pdf

NRICH

<https://nrich.maths.org/content/id/13291/EYFSKS1CurriculumLinkedtoNRI CH.pdf>



HCAT Maths Year on a Page

Year 3 – Curriculum Guide – Statistics



<u>National Curriculum Objectives:</u> Pupils should be taught to: • Interpret and present data using bar charts, pictograms and tables • Solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’]using information presented in scaled bar charts	<u>Misconceptions:</u> • Scales that the bar charts increase by - not always by the same amount. • The difference between pictograms and bar charts • Not counting the scale correctly • Knowing what ‘fewer and more’ mean when answering questions • Constructing own bar charts from scratch • Misunderstanding what the symbol value is a pictogram	<u>Mathematical Language:</u> Bar chart, interpret data, problems, pictogram, tables, chart, construct, interpret, information, scales
<u>Development steps:</u> NOTE: these steps are not necessarily listed in order, nor are they the focus for a whole lesson in some cases. They are listed to support elements that need to be explored at some point. •Build on understanding from Y2 •Interpret information in order to answer questions about the data. •Understand the value of each symbol use and what half a symbol means •Construct pictograms and choose an appropriate key •Interpret info in pictograms and tally charts in order to construct bar charts •Interpret bar charts with scales of 1,2,5 and 10 •Interpret information from tables to answer one and two step problems	<u>Other links:</u> • Real life context/scenarios where children can collect live data • Addition and subtraction linked with questions related to the data	<u>Contexts/resources:</u> <u>Maths Hub-</u> https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/