

Autumn 1

Unit 1: Place value within 1,000 (11 textbook lessons)

Unit 2: Addition and subtraction (1) (10 textbook lessons)

Skills focus:

- Read and write numbers to 1,000 in numerals and words
- Recognise the place value of hundreds, tens and ones
- Represent numbers using different representations
- Partition three-digit numbers
- Find 10 or 100 more/less than a given number
- Estimate numbers on a number line
- Compare and order numbers to 1,000
- Count in multiples of 50 and 100

Key vocabulary:

place value, hundreds, tens, ones, digit, numeral, number, partition, represent, estimate, compare, order, greater than, less than, equal to, ascending, descending, number line

Sentence stems:

___ has _ hundreds, _ tens and _ ones
The value of the ___ is...
I know the number is approximately ___ because...

Skills focus:

- Add and subtract multiples of 100 mentally
- Add and subtract a three-digit number and ones, tens or hundreds
- Use place value knowledge to calculate efficiently
- Solve problems involving addition and subtraction
- Develop mental calculation strategies before moving to written methods

Key vocabulary:

addition, subtraction, add, subtract, sum, total, difference, altogether, more, less, exchange, partition, place value, calculation, inverse

Sentence stems:

I changed the ___ because...
I added ___ tens/hundreds
I know my answer is correct because...
A more efficient method would be...

Possible resources:

Dienes
Place value counters
Base Ten
Place value charts
100 squares
Number lines
Bead strings

Possible misconceptions:

- Misunderstanding what the numbers represent
- Reversing the order of the numbers
- Comparing numbers by looking at only one digit
- Misreading a number line when estimating

Possible resources:

Place value counters
Dienes tens and ones
Number lines
Bead strings
Bar models
Numicon
Part-whole models

Possible misconceptions:

- Difficulty crossing a place value boundary
- Counting in ones when a more efficient strategy is available
- Confusing the difference with the total

Strengthening:

- Recap two-digit numbers first
- Build numbers using concrete resources
- Consistent use of place value chart
- Use labelled number lines

Deepening:

- Explain why one number is greater/less than another
- Estimate numbers on less structured number lines
- Explain patterns when adding or subtracting 10 and 100
- Find numbers that satisfy given conditions

Strengthening:

- Use concrete resources
- Begin with adding/subtracting 10 and 100 before introducing ones
- No exchanging initially
- Encourage children to verbalise which place value is changing

Deepening:

- Choose the most efficient mental strategy
- Explain why a strategy works
- Find multiple calculations with the same answer
- Solve missing digit problems
- Identify and explain errors in calculations

Ready to Progress Link:

- 3NPV–1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.
- 3NPV–2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.
- 3NPV–3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.
- 3NPV–4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.

Ready to Progress Link:

- 3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice.
- 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).
- 3AS–1 Calculate complements to 100.
- 3AS–2 Add and subtract up to three-digit numbers using columnar methods.

Autumn 2			
Unit 3: Addition and subtraction (2) (9 textbook lessons)		Unit 4: Multiplication and division (1) (15 textbook lessons)	
Skills focus: -Develop written methods for addition and subtraction -Add and subtract three-digit numbers -Understand and apply exchanging/regrouping -Use formal written methods accurately -Solve one and two-step problems -Use estimation and inverse operations to check calculations Key vocabulary: column, formal method, exchange, regroup, place value, ones, tens, hundreds, add, subtract, total, different, estimate, inverse, check Sentence stems: I exchanged ____ because... The ____ column represents ____ My estimate is... I checked using the inverse...		Skills focus: -Recall and use multiplication and division facts -Develop understanding of equal groups, arrays, and scaling -Use the 3, 4 and 8 times tables alongside previously learned facts -Recognise the inverse relationship between multiplication and division -Solve multiplication and division problems using concrete, pictorial and abstract representations Key vocabulary: multiplication, division, multiply, divide, equal groups, groups of, array, rows, columns, factor, product, multiple, share, grouping, quotient, inverse, scaling Sentence stems: There are ____ groups of ____ The array shows... I used the ____ times tables to help me solve this because... Multiplication and division are related because...	
Possible resources: Place value counters Dienes Place value charts Column method grids Squared paper Number lines Bar models Estimation number lines		Possible misconceptions: -Misaligning place value columns -Forgetting to exchange -Exchanging the wrong amount -Subtracting the smaller digit from the largest regardless of its position -Not recording exchanges correctly	
Strengthening: -Use colour/visual cues to align columns -Build the calculation using counters -Start without exchanging -Reduce the number of digits and gradually increase complexity		Deepening: -Explain why exchanging is necessary -Compare written and mental methods -Solve missing digit calculations -Create a problem that produces a given answer	
Ready to Progress Link: 3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). 3AS–1 Calculate complements to 100. 3AS–2 Add and subtract up to three-digit numbers using columnar methods. 3AS–3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.		Ready to Progress Link: 3NPV–4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. 3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number. 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). 3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.	

Spring 1					
Unit 5: Multiplication and division (2) (14 textbook lessons)		Unit 6: Money (5 textbook lessons)		Unit 7: Statistics (5 textbook lessons)	
Skills focus: -Build fluency with multiplication and division facts -Use related multiplication and division facts -Compare multiplication and division statements -Multiply and divide two-digit numbers by one-digit numbers -Develop mental methods before moving to formal written methods -Solve missing number, scaling, correspondence and mixed problems -Develop understanding of divisibility Key vocabulary: multiplication, division, multiply, divide, factor, product, quotient, multiple, divisible, equal groups, inverse related facts, scaling, correspondence, statement, calculation, remainder Sentence stems: The related division facts is... I partitioned ___ into... These calculations are related because...		Skills focus: -Recognise and use pounds and pence accurately -Convert between pounds and pence -Add and subtract amounts of money -Find change -Solve practical money problems using pounds and pence Key vocabulary: Money, pounds, pence, £, p, coin, note, amount, value, cost, total, change, convert, decimal, add, subtract Sentence stems: ___ is equal to ___ The total cost is... The change is... I converted ___ because... Another way to make this amount is...		Skills focus: -Interpret and present data using pictograms, bar charts and tables -Understand and use scales -Extract information from different representations -Answer one and two-step questions, including comparison questions Key vocabulary: data, statistics, pictogram, bar chart, table, scale, category, frequency, most, least, total, difference, compare, information, represent Sentence stems: The chart shows... The scale tells me... There are ___ more than... There are ___ fewer than... I know because the data shows...	
Possible resources: Counters Cubes Arrays Numicon Multiplication grids Place value counters Number lines Bead strings		Possible resources: Coins and notes Place value charts Decimal grids Number lines Role-play shop Price labels Shopping lists Bar models		Possible resources: Squared paper Graph paper Counters Cubes Tally charts Pictogram templates Bar chart templates Classroom surveys	
Possible misconceptions: -Confusing factors and products -Assuming all numbers are divisible by every factor -Forgetting the inverse relationship		Possible misconceptions: -Confusing pounds and pence -Treating pence as whole pounds -Counting the number of coins rather than their value -Finding change by subtracting in the wrong direction		Possible misconceptions: -Misreading the scale on a graph or chart -Counting symbols rather than their value -Reading the height of a bar inaccurately -Answering without referring to the data -Confusing how many more with how many altogether	
Strengthening: -Revisit the 3, 4 and 8 times tables -Partition two-digit numbers into tens and ones when multiplying -Use place value counters to make the exchange visible		Strengthening: -Compare and explain different related facts -Find multiple solutions to missing number problems -Investigate divisibility patterns -Explain why a certain strategy is more efficient		Strengthening: -Make amounts using concrete money -Use place value charts to show the relationship between pounds and pence -Use number lines to find change	
Deepening: -Find multiple ways to make the same amount -Compare the efficiency of different coin combinations -Solve multi-step shopping problems		Deepening: -Use one-to-one pictograms -Highlight the scale on charts -Read one category at a time -Model how to locate information accurately		Deepening: -Solve two-step problems -Identify errors in charts -Explain conclusions from data -Create questions for the given chart -Decide which representation is most appropriate for a data set	
Ready to Progress Link: 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).		Ready to Progress Link:		Ready to Progress Link:	

Spring 2			
Unit 8: Length (11 textbook lessons)		Unit 9: Fractions (1) (11 textbook lessons)	
Skills focus: -Measure, compare, add and subtract lengths using metres, centimetres and millimetres -Understand equivalent lengths -Convert between metres and centimetres and centimetres and millimetres -Measure and calculate perimeter -Solve practical problems involving length. Key vocabulary: length, measure, centimetre, metre, millimetre, cm, m, mm, equivalent, convert, longer, shorter, compare, perimeter, distance, total Sentence stems: I measured this in ___ because... ___ cm is equal to ___ mm. I converted the measurement because... The perimeter is...		Skills focus: -Recognise and use unit and non-unit fractions as numbers -Understand fractions as parts of a whole and as numbers on a number line -Make the whole from fractions -Count in tenths -Understand tenths as one object divided into ten equal parts and as division by 10 -Find fractions of sets of objects -Compare and order unit fractions and fractions with the same denominator Key vocabulary: fraction, whole, part, equal parts, numerator, denominator, unit fraction, non-unit fraction, half, third, quarter, fifth, tenth, tenths, number line, equivalent, compare, order Sentence stems: The denominator tells us... The numerator tells us... There are ___ equal parts I know ___ is greater than ___ because... One tenth means...	
Possible resources: Rulers Metre sticks Tape measures Trundle wheels String Cubes Squared paper Number lines		Possible misconceptions: -Measuring from the wrong point on a ruler. -Confusing cm, m and mm. -Believing a larger numerical measurement is always longer without considering the unit. -Adding measurements without converting to the same unit. -Confusing area and perimeter.	
Possible resources: Fraction strips Fraction circles Counters Cubes Paper folding Bar models Number lines Place value counters		Possible misconceptions: -Confusing numerator and denominator -Creating unequal fractional parts -Misunderstanding fractions on a number line -Confusion when comparing fractions	
Strengthening: -Begin with direct comparison and practical measuring -Use clearly labelled rulers -Focus on one unit at a time -Use place value charts to show conversions -Use physical shapes to demonstrate perimeter		Deepening: -Solve problems requiring different units -Decide which unit is most appropriate -Find missing side lengths using perimeter -Investigate shapes with the same perimeter	
Strengthening: -Revisit halves, quarters and thirds from Year 2 -Fold shapes practically -Use concrete resources for sharing equally -Use fraction strips to show equivalence -Use labelled number lines -Introduce tenths through practical sharing and division by 10		Deepening: -Explain why one fraction is greater than another -Find different ways to represent the same fraction -Solve fraction-of-an-amount problems -Explain the connection between tenths, division by 10 and the number line	
Ready to Progress Link:		Ready to Progress Link: 3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency). 3F–3 Reason about the location of any fraction within 1 in the linear number system.	

Summer 1			
Unit 10: Fractions (2) (9 textbook lessons)		Unit 11: Time (11 textbook lessons)	
Skills focus: -Recognise and show equivalent fractions using diagrams -Compare and order unit fractions and fractions with the same denominator -Add and subtract fractions with the same denominator within one whole -Solve problems involving fractions, including fractions of measures Key vocabulary: fraction, whole, part, equal parts, numerator, denominator, equivalent, unit fraction, non-unit fraction, compare, order, greater than, less than, add, subtract, tenths Sentence stems: These fractions are equivalent because... The denominator tells us... ____ is greater than ____ because... I kept the denominator the same because... I found the fraction of the measure by...		Skills focus: -Know the number of seconds in a minute and days in each month, year and leap year -Read and write analogue time to increasing accuracy, including to the nearest minute -Use 12-hour and 24-hour clocks -Use Roman numerals I–XII on analogue clocks -Estimate, compare and calculate durations. Find start and end times -Measure time in seconds Key vocabulary: time, second, minute, hour, day, week, month, year, leap year, duration, analogue, digital, o'clock, half past, quarter past, quarter to, am, pm, noon, midnight, 12-hour, 24-hour, estimate, start, end Sentence stems: The time is... The minute hand shows... The duration is... It starts at ____ and ends at ____. "I know this is ____ hours/minutes because... In 24-hour time, this is..."	
Possible resources: Fraction strips Fraction circles Bar models Number lines Counters Paper folding Numicon Measuring equipment	Possible misconceptions: -Thinking that a larger denominator means a larger fraction -Adding the denominators when adding fractions -Forgetting that fractions must have the same denominator when adding/subtracting	Possible resources: Teaching clocks Mini clocks Digital clocks Stopwatches Timers Calendars Timelines Daily timetables Number lines	Possible misconceptions: -Confusing the hour and minute hand -Difficulty reading times to the nearest minute -Confusing am and pm -Confusing 12-hour and 24-hour time -Assuming every month has the same number of days -Difficulty calculating durations that cross an hour -Confusing duration with the time at which an event starts
Strengthening: -Use concrete fraction strips and bar models first -Focus on fractions with small denominators -Use visual models to show equivalence -Emphasise that only the numerator changes	Deepening: -Explain why two fractions are equivalent -Identify and correct errors -Create a fraction problem with a given answer -Find more than one equivalent fraction	Strengthening: -Revisit o'clock, half past and quarter times before moving to minutes -Count around the clock in fives -Use familiar daily events -Use timelines and number lines to calculate duration	Deepening: -Solve problems involving start and end times -Calculate durations crossing the hour -Convert between 12-hour and 24-hour times -Explain different strategies for calculating duration -Investigate calendars, including leap years
Ready to Progress Link: 3F–3 Reason about the location of any fraction within 1 in the linear number system. 3F–4 Add and subtract fractions with the same denominator, within 1.		Ready to Progress Link:	

Summer 2					
Unit 12: Angles and properties of shapes (9 textbook lessons)		Unit 13: Mass (6 textbook lessons)		Unit 14: Capacity (6 textbook lessons)	
Skills focus: -Recognise angles as turns and as properties of shapes. Identify right angles -Recognise angles greater than or less than a right angle -Understand turns in relation to right angles -Identify horizontal, vertical, parallel and perpendicular lines -Recognise, describe, draw and construct 2D and 3D shapes. Key vocabulary: angle, right angle, turn, quarter turn, half turn, three-quarter turn, full turn, greater than, less than, horizontal, vertical, parallel, perpendicular, 2D, 3D, polygon, vertex, side, edge, face Sentence stems: This angle is ___ than a right angle because... These lines are parallel because... These lines are perpendicular because... This shape has ___ sides/vertices/faces/edges. I know it is a ___ because...		Skills focus: -Measure and compare mass using kilograms and grams -Read scales accurately -Add and subtract measurements of mass -Use appropriate units -Solve practical problems involving mass Key vocabulary: mass, kilogram, gram, kg, g, heavy, light, heavier, lighter, measure, scale, estimate, compare, total, difference Sentence stems: I would measure this in ___ because... The mass is... ___ is heavier than ___ because... I converted the measurement because... My estimate was reasonable because...		Skills focus: -Measure and compare capacity using litres and millilitres -Read measuring scales accurately -Add and subtract capacities -Use appropriate units -Solve practical problems involving capacity Key vocabulary: capacity, volume, litre, millilitre, l, ml, full, empty, half full, nearly full, capacity, measure, scale, estimate, compare, total, difference Sentence stems: The capacity is... I would measure this in ___ because... ___ holds more than ___ because... I converted the measurement because... My estimate was reasonable because...	
Possible resources: Rulers, Mirrors Geoboards 2D and 3D shape sets Construction materials Straws Modelling sticks Squared paper		Possible resources: Balance scales Weighing scales Classroom objects Measuring equipment Number lines		Possible resources: Measuring jugs Cylinders Containers Water/sand Funnels Scales Number lines	
Possible misconceptions: -Thinking the size of an angle depends on the arm length Confusing perpendicular and parallel lines -Confusing edges, faces and vertices -Thinking a shape changes when rotated -Difficulty recognising shapes in different orientations		Possible misconceptions: -Confusing mass with size. -Thinking a larger object must be heavier. -Confusing grams and kilograms. -Misreading scales. -Adding measurements expressed in different units without converting.		Possible misconceptions: -Confusing capacity with the amount currently in a container -Thinking a taller container always has greater capacity. -Confusing litres and millilitres. -Misreading scales -Adding measurements with different units without converting	
Strengthening: -Use physical turns first -Give right-angle testers -Compare angles directly with a right angle -Use physical lines and objects -Handle 2D and 3D shapes		Strengthening: -Begin with direct comparison -Handle objects and make predictions -Use clearly marked scales -Introduce kg before g -Keep calculations in the same unit initially		Strengthening: -Use practical filling and emptying activities -Use direct comparison -Start with litres before introducing millilitres -Use clearly marked measuring jugs and count scale intervals together	
Deepening: -Explain how many right angles make different turns -Find shapes with particular angle properties -Identify multiple lines of symmetry where appropriate. - Construct 3D shapes and explain their properties.		Deepening: -Choose an appropriate unit and explain the choice -Identify errors in measurements - Solve problems requiring conversion between units -Find missing measurements -Explain whether an estimate is reasonable		Deepening: -Choose an appropriate unit for different contexts. -Solve multi-step capacity problems -Identify errors in measuring -Explain why two differently shaped containers can have the same capacity	
Ready to Progress Link: 3G–1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations. 3G–2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.		Ready to Progress Link:		Ready to Progress Link:	