



Primary Mathematics Scheme of Work: Class 1 Year 1



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 1	Number: Place Value Numbers within 10				Number: Addition and Subtraction Numbers within 20		
Autumn 2	Number: Addition and Subtraction Numbers within 50			Geometry- Shape		Number: Place Value Numbers within 100	
Spring 1	Measurement: Money			Number: Addition and Subtraction Numbers within 20			
Spring 2	Number: Multiplication and Division			Measurement: Length and Height	Number: Fractions		
Summer 1	Statistics		Measurement Mass and Volume		Geometry: Position and Direction		
Summer 2	Geometry Shape		Measurement Time		Number: Four Operations Consolidation		

Year 1

Number: Place Value		
Key concepts (National Curriculum Statements) Pupils should be taught to: <ul style="list-style-type: none"> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens given a number, identify one more and one less identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least read and write numbers from 1 to 20 in numerals and words. 		
Notes and guidance (non-statutory) <ul style="list-style-type: none"> Pupils practise counting (1, 2, 3...), ordering (for example, first, second, third...), and to indicate a quantity (for example, 3 apples, 2 centimetres), including solving simple concrete problems, until they are fluent. Pupils begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations. They practise counting as reciting numbers and counting as enumerating objects, and counting in 2s, 5s and 10s from different multiples to develop their recognition of patterns in the number system (for example, odd and even numbers), including varied and frequent practice through increasingly complex questions. They recognise and create repeating patterns with objects and with shapes. Pupils practise counting (1, 2, 3...), ordering (for example, first, second, third...), and to indicate a quantity (for example, 3 apples, 2 centimetres), including solving simple concrete problems, until they are fluent. Pupils begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations. They practise counting as reciting numbers and counting as enumerating objects, and counting in 2s, 5s and 10s from different multiples to develop their recognition of patterns in the number system (for example, odd and even numbers), including varied and frequent practice through increasingly complex questions. They recognise and create repeating patterns with objects and with shapes. 		
Possible Themes	Key learning points	
<ul style="list-style-type: none"> Explore the value of numbers Explore where numbers live in our number system Solve problems comparing the value of numbers Investigate number patterns 	<ul style="list-style-type: none"> Show the value of a number using objects or pictures Read numbers to 20 in numerals and words Write numbers to 20 and beyond in numerals Write numbers to 20 in words Identify and represent numbers on the number line Identify and represent numbers using pictorial representations Compare the value of numbers explaining if they are more/ less than or equal to another number or numbers Read and write numbers to 100 in numerals Count on to or back from numbers in ones from any given number up to 100 Count in multiples of two starting from zero Count in multiples of five starting from zero Count in multiples of ten starting from zero 	
Prerequisite EYFS – development matters (months)		NCETM – Ready to Progress
16 - 26	✓ Says some counting words randomly	Count within 100, forwards and backwards, beginning with 0 or 1, or from any given number <ul style="list-style-type: none"> count forwards from 80 to 110 count backwards from 105 Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens <ul style="list-style-type: none"> Find p 39 in a book Make a label to show how many things were in your collection Count groups of 10 each of 2p, 5p and 10p coins Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least <ul style="list-style-type: none"> I'm giving each of you a strip of card with some numbers on [five numbers at random from 0 to 30]. Point to the number which is worth most. Now point to the number which is worth least. Make these numbers using tens and ones apparatus and put them in order. Why have you put this number there? Read and write numbers from 1 to 20 in numerals and words
22 - 36	✓ Recites some number names in sequence. ✓ Creates and experiments with symbols and marks representing ideas of number	
30 - 50	✓ Uses some number names and number language spontaneously. ✓ Uses some number names accurately in play. ✓ Recites numbers in order to 10. ✓ Knows that numbers identify how many objects are in a set. ✓ Beginning to represent numbers using fingers, marks on paper or pictures. ✓ Sometimes matches numeral and quantity correctly. ✓ Shows curiosity about numbers by offering comments or asking questions ✓ Shows an interest in numerals in the environment. ✓ Shows an interest in representing numbers. ✓ Realises not only objects, but anything can be counted, including steps, claps or jumps.	

40 – 60+	<ul style="list-style-type: none">✓ Recognise some numerals of personal significance.✓ Recognises numerals 1 to 5.✓ Counts up to three or four objects by saying one number name for each item.✓ Counts actions or objects which cannot be moved.✓ Counts objects to 10, and beginning to count beyond 10.✓ Counts out up to six objects from a larger group.✓ Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.✓ Counts an irregular arrangement of up to ten objects.	Make some labels for collections using numbers and words.	
Reasoning opportunities and probing questions		Mathematical Language	Possible misconceptions
<ul style="list-style-type: none">• Show me (find/ write) the number that will label this group of objects. And Another. And Another.• Show me (find/write) a number with 2 tens and another... and another. Which of your numbers is the greatest? And Another.• Can you change this pot so that it has enough pencils for 8 children?• Convince me that 13 is less than 20.• Always/Sometimes/Never: A number with 9 in the units is always bigger than one with 6 in the units.		<p>One, Two, Three, Four, Five, Six, Seven, Eight, Nine, Ten, Eleven, Twelve, Thirteen, Fourteen, Fifteen, Sixteen, Seventeen, Eighteen, Nineteen, Twenty</p> <p>More than, greater, larger, bigger</p> <p>Less than, fewer, smaller</p> <p>Equal to, the same amount as, as many as</p> <p>Greatest/ Most/biggest/largest</p> <p>Least/fewest/smallest</p> <p>Hundreds, Tens, units (ones)</p> <p>Exchange</p> <p>Digit</p> <p>Notation</p> <p>The equals symbol (=)</p>	<ul style="list-style-type: none">• Some pupils may appear to be counting confidently but they may just be mimicking the rhythm of the counting pattern.• Some pupils may not be confident in counting over the tens boundaries• Some pupils may not understand that a number can be used to show/ label the final (cardinal) value of the set of objects being counted, i.e. the final number that they have said represents the value of the objects in the set.• Some pupils may muddle the ‘teen’ and the ‘ty’ numbers• Some pupils may read the units digit before the tens digit.

Number: Addition and Subtraction

Key concepts (National Curriculum Statements)

Pupils should be taught to:

- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.

Notes and guidance (non-statutory)

- Pupils practise counting (1, 2, 3...), ordering (for example, first, second, third...), and to indicate a quantity (for example, 3 apples, 2 centimetres), including solving simple concrete problems, until they are fluent.
- Pupils begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations.
- They practise counting as reciting numbers and counting as enumerating objects, and counting in 2s, 5s and 10s from different multiples to develop their recognition of patterns in the number system (for example, odd and even numbers), including varied and frequent practice through increasingly complex questions.
- They recognise and create repeating patterns with objects and with shapes.
- Pupils practise counting (1, 2, 3...), ordering (for example, first, second, third...), and to indicate a quantity (for example, 3 apples, 2 centimetres), including solving simple concrete problems, until they are fluent.
- Pupils begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations.
- They practise counting as reciting numbers and counting as enumerating objects, and counting in 2s, 5s and 10s from different multiples to develop their recognition of patterns in the number system (for example, odd and even numbers), including varied and frequent practice through increasingly complex questions.
- They recognise and create repeating patterns with objects and with shapes.

Possible Themes		Key learning points
<ul style="list-style-type: none"> Explore the value of numbers Explore where numbers live in our number system Solve problems comparing the value of numbers Investigate number patterns Investigate one more or one less than any number Investigate number patterns Explore addition and subtraction facts 		<ul style="list-style-type: none"> Show the value of a number using objects or pictures Read numbers to 20 in numerals and words Write numbers to 20 and beyond in numerals Write numbers to 20 in words Identify and represent numbers on the number line Identify and represent numbers using pictorial representations Compare the value of numbers explaining if they are more/ less than or equal to another number or numbers Read and write numbers to 100 in numerals Count on to or back from numbers in ones from any given number up to 100 Count in multiples of two starting from zero Count in multiples of five starting from zero Count in multiples of ten starting from zero Identify the number that is one more than a given number Identify the number that is one less than a given number Know addition facts to 10 Know subtraction facts from 10 Know addition facts within 10 Know subtraction facts within 10 Know addition facts to 20 Know subtraction facts from 20 Know addition facts within 20 Know subtraction facts within 20 Count to and across 100 and beyond in ones from any number Count back from 100 and beyond in ones from any number Add two one-digit numbers to 20, including zero Add a one-digit and two-digit numbers to 20, including zero Read and interpret statements involving the symbols '+' and '=' involving numbers up to 20 Write statements involving the symbols '+' and '=' involving numbers up to 20 Subtract one-digit number (a) from another one-digit number (b, a<b) within 20, including zero Subtract a one-digit number from a two-digit numbers within 20, including zero Read and interpret statements involving the symbols '-' and '=' involving numbers up to 20 Write statements involving the symbols '-' and '=' involving numbers up to 20 Solve one-step problems calculations involving numbers up to 20 using concrete objects and pictorial representations Solve missing number problems involving adding numbers to 20 Solve missing number problems involving subtracting numbers within 20
Prerequisite		NCETM – Ready to Progress
16-26	✓ Says some counting words randomly	count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number <ul style="list-style-type: none"> ➤ count forwards from 80 to 110 ➤ count backwards from 105
22-36	✓ Recites some number names in sequence. Creates and experiments with symbols and marks representing ideas of number	count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens <ul style="list-style-type: none"> ➤ Find p 39 in a book ➤ Make a label to show how many things were in your collection

30-50	<ul style="list-style-type: none">✓ Uses some number names and number language spontaneously.✓ Uses some number names accurately in play.✓ Recites numbers in order to 10.✓ Knows that numbers identify how many objects are in a set.✓ Beginning to represent numbers using fingers, marks on paper or pictures.✓ Sometimes matches numeral and quantity correctly.✓ Shows curiosity about numbers by offering comments or asking questions✓ Shows an interest in numerals in the environment.✓ Shows an interest in representing numbers.✓ Realises not only objects, but anything can be counted, including steps, claps or jumps.	<ul style="list-style-type: none">➤ Count groups of 10 each of 2p, 5p and 10p coins <p>identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</p> <ul style="list-style-type: none">➤ I'm giving each of you a strip of card with some numbers on [five numbers at random from 0 to 30].➤ Point to the number which is worth most. Now point to the number which is worth least.➤ Make these numbers using tens and ones apparatus and put them in order.➤ Why have you put this number there? <p>read and write numbers from 1 to 20 in numerals and words</p> <ul style="list-style-type: none">• Make some labels for collections using numbers and words. <p>read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs</p> <ul style="list-style-type: none">➤ Use the vocabulary add, subtract, minus, equals, is the same value as, total, more than, fewer/less than.➤ Explain that things on both sides of the equals sign have the same value➤ Know that the 'total' can be presented on either side of the equals sign➤ Complete 'empty box' number sentences <p>represent and use number bonds and related subtraction facts within 20</p> <ul style="list-style-type: none">➤ I'm thinking of a number. I've subtracted 6 and the answer is 8. What number was I thinking of? Explain how you know.➤ I'm thinking of a number. I've added 7 and the answer is 18. What number was I thinking of? Explain how you know.➤ I know that 6 and 4 is 10. How can I find 7 + 4? How could you work it out? <p>add and subtract one-digit and two-digit numbers to 20, including zero</p> <ul style="list-style-type: none">➤ What is 37 subtract 10? How did you work that out? How could you show that using cubes/a number line/a 100-square? What would 37 subtract 20 be?➤ Make up some difference questions with the answer 5. Can you show how to solve them using counters? Can you show how to find the answer on a number line? <p>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? − 9.</p> <ul style="list-style-type: none">➤ Make up some additions with the answer 15. Try to put them in different ways, like this: 10 + 5 = 15. The total of 10 and 5 is 15. 10 and 5 more makes 15.➤ How many ways can you show me that 9 subtract 3 is 6? <p>Make up some subtractions with the answer 5. Try to put them in different ways, like this: 11 − 6 = 5. The difference between 6 and 11 is 5.</p>	
40-60+	<ul style="list-style-type: none">✓ Recognise some numerals of personal significance.✓ Recognises numerals 1 to 5.✓ Counts up to three or four objects by saying one number name for each item.✓ Counts actions or objects which cannot be moved.✓ Counts objects to 10, and beginning to count beyond 10.✓ Counts out up to six objects from a larger group.✓ Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.✓ Counts an irregular arrangement of up to ten objects. <p>Early Learning Goal Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.</p>		
Reasoning opportunities and probing questions		Mathematical Language	Possible misconceptions
<ul style="list-style-type: none">• Show me (find/ write) the number that will label this group of objects. And Another. And Another.• Show me (find/write) a number with 2 tens and another... and another. Which of your numbers is the greatest? And Another.• Can you change this pot so that it has enough pencils for 8 children?• Convince me that 13 is less than 20.• Always/Sometimes/Never: A number with 9 in the units is always bigger than one with 6 in the units.• I'm thinking of a number. It is 1 more / less than 36. What number am I thinking of?• Kenny says that one less than 53 is 43. Is he correct?• I will clap where a number is missing: 78, 79, 80 ... clap ... 82, 83, 84. What number did I miss?• If I know that 3 + 7 = 10, what else do I know?• What facts can you tell me from this array? <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>		One, Two, Three, Four, Five, Six, Seven, Eight, Nine, Ten, Eleven, Twelve, Thirteen, Fourteen, Fifteen, Sixteen, Seventeen, Eighteen, Nineteen, Twenty More than, greater, larger, bigger Less than, fewer, smaller Equal to, the same amount as, as many as Greatest/ Most/biggest/largest Least/fewest/smallest Hundreds, Tens, units (ones) Exchange Digit	<ul style="list-style-type: none">• Some pupils may appear to be counting confidently but they may just be mimicking the rhythm of the counting pattern.• Some pupils may not be confident in counting over the tens boundaries• Some pupils may not understand that a number can be used to show/ label the final (cardinal) value of the set of objects being counted, i.e. the final number that they have said represents the value of the objects in the set.• Some pupils may muddle the 'teen' and the 'ty' numbers• Some pupils may read the units digit before the tens digit.• Some pupils might count the number that they are starting from as one of the numbers in the count when adding on or counting back.• Some pupils may appear to be counting confidently but they may just be mimicking the rhythm of the counting pattern. <p>When exploring related number facts some pupils may just manipulate the numbers and record incorrectly. For example instead of understanding that they need to subtract from the largest number (for example 10 − 6 =4) they may move the numbers around because they think they are related (for example 6 − 4 = 10).</p>

Multiplication and Division		
Key concepts (National Curriculum Statements) Pupils should be taught to: <ul style="list-style-type: none"> solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. 		
Notes and guidance (non-statutory) <ul style="list-style-type: none"> Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities. They make connections between arrays, number patterns, and counting in twos, fives and tens 		
Possible Themes	Key learning points	
<ul style="list-style-type: none"> Develop arithmetic skills Explore properties of numbers Explore ways of writing calculations Solve problems involving multiplication and division 	<ul style="list-style-type: none"> Double numbers up to at least 10 Halve numbers up to (at least) 20 Count (from zero) in equal steps of 2s Count (from zero) in equal steps of 5s Count (from zero) in equal steps of 10s Use concrete objects to solve one-step problems involving multiplication Use concrete objects to solve one-step problems involving division (grouping) Use concrete objects to solve one-step problems involving division (sharing equally) Use pictorial representations to solve one-step problems involving multiplication Use pictorial objects to solve one-step problems involving division (grouping) Use pictorial objects to solve one-step problems involving division (sharing equally) Use arrays to solve one-step problems involving multiplication 	
Prerequisite	NCETM – Ready to Progress	
<ul style="list-style-type: none"> ✓ Pupils need to be able to read, write and order numbers to at least 20 ✓ Subitise small groups of objects (i.e. can say how many there are without needing to count each individual object.) 	<p>solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of a teacher</p> <p>Children should be able to:</p> <ul style="list-style-type: none"> ➤ Use practical apparatus, arrays and images to help solve multiplication and division problems such as: ➤ Ben had 5 football stickers. His friend Tom gave him 5 more, how many does he have altogether? ➤ Share 12 sweets between two children. How many do they each have? ➤ Find half of and double a number or quantity: ➤ 16 children went to the park at the weekend. Half that number went swimming. How many children went swimming? ➤ I think of a number and halve it. I end up with 9, what was my original number? 	
Reasoning opportunities and probing questions	Mathematical Language	Possible misconceptions
<ul style="list-style-type: none"> Show me a number that you can half. And another. And another. Convince me double 6 is 12. Convince me 3 multiplied by 4 is 12 (using concrete apparatus such as Numicon, Cuisenaire, etc.). Convince me if 12 sweets are shared equally between 3 friend, each friend will receive 4 sweets (using concrete apparatus such as Numicon, Cuisenaire, etc.). Benny thinks you can double any number but only halve even numbers. Do you agree with Benny? Explain your answer. 	Calculation, Calculate Odd, Even Multiply, Multiplication, Times, Product Repeated addition Array Divide, Division Groups Grouping Sharing	<ul style="list-style-type: none"> Some pupils may interpret ‘3 multiplied by 4’ as ‘4 groups/lots of 3’ rather than ‘3 groups/lots of 4’ Some pupils may try to give whole number answers for the half of an odd number – e.g. Half of 9 is 4 (or 5) Some pupils may not share equally when solving division problems – e.g. Divide 10 by 2: Answer 6 and 4


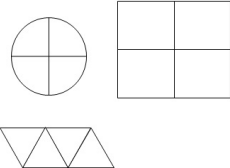

Fractions

Key concepts (National Curriculum Statements)
Pupils should be taught to:

- recognise, find and name a half as one of two equal parts of an object, shape or quantity
- recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Notes and guidance (non-statutory)

- Pupils are taught half and quarter as ‘fractions of’ discrete and continuous quantities by solving problems using shapes, objects and quantities. For example, they could recognise and find half a length, quantity, set of objects or shape.
- Pupils connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole.

Possible Themes	Key learning points
<ul style="list-style-type: none">• Explore fractions	<ul style="list-style-type: none">• Recognise a half as one of two equal parts of an object or shape• Recognise a half as one of two equal parts of a quantity• Recognise a quarter as one of four equal parts of an object or shape• Recognise a quarter as one of four equal parts of a quantity• Use fraction notation to write one half• Use fraction notation to write one quarter• Identify half of a set of objects• Identify quarter of a set of objects
Prerequisite	NCETM – Ready to Progress
<div><div>✓ Know the language of double and half</div><div>✓ Know the meaning of the word ‘equal’</div></div>	<div><div>recognise, find and name a half as one of two equal parts of an object, shape or quantity</div><div><div>➤ Here is a set of 12 pencils How many is half the set?</div><div></div></div><div><div>➤ Shade one quarter of each shape</div><div></div></div></div> <div><div>recognise, find and name a quarter as one of four equal parts of an</div><div><div>➤ Four Children share 12 strawberries into equal parts. How many strawberries will each child have?</div><div></div><div>object, shape or quantity</div></div></div>

Reasoning opportunities and probing questions	Mathematical Language	Possible misconceptions
<ul style="list-style-type: none"> • (Given a 2 by 2 grid) Show me $\frac{1}{2}$ of this shape. And another, and another ... • (Given a 4 by 3 grid) Show me $\frac{1}{4}$ of this shape. And another, and another ... • Convince me that you can split a group of 9 objects in half • Kenny says that he would like the bigger half. Is this possible? Explain your answer. 	<p>Part</p> <p>Equal</p> <p>Whole</p> <p>Half, halves</p> <p>Quarter</p> <p>Fraction</p> <p>Numerator</p> <p>Denominator</p> <p>Notation</p> <p>Horizontal bar for fractions; $\frac{1}{2}, \frac{1}{4}$</p> <p>Diagonal bar for fractions; $\frac{1}{2}, \frac{1}{4}$</p>	<ul style="list-style-type: none"> • Some pupils may not understand that when splitting one whole into a fractional amount, each part must be equal • Some pupils may think that a quarter is a larger piece than a half since 4 is greater 2 • Some pupils may not appreciate that when shading a fraction of a shape, the position of the shaded section can vary

Measurement

Key concepts (National Curriculum Statements)


Pupils should be taught to:

1. Compare, describe and solve practical problems for:
 - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
 - mass/weight [for example, heavy/light, heavier than, lighter than]
 - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
 - time [for example, quicker, slower, earlier, later]
2. measure and begin to record the following:
 - lengths and heights
 - mass/weight
 - capacity and volume
 - time (hours, minutes, seconds)
3. recognise and know the value of different denominations of coins and notes
4. sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
5. recognise and use language relating to dates, including days of the week, weeks, months and years
6. tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.

Notes and guidance (non-statutory)

- The pairs of terms: mass and weight, volume and capacity, are used interchangeably at this stage.
- Pupils move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units.
- In order to become familiar with standard measures, pupils begin to use measuring tools such as a ruler, weighing scales and containers.
- Pupils use the language of time, including telling the time throughout the day, first using o'clock and then half past.

Possible Themes	Key learning points
<ul style="list-style-type: none"> • Explore the measurement of distance • Explore the measurement of mass • Explore the measurement of capacity • Measure time 	<ul style="list-style-type: none"> • Measure length using appropriate equipment • Measure mass using appropriate equipment • Measure capacity using appropriate equipment • Measure time using hours, minutes and seconds using appropriate equipment • Record measurements using a system of non-standard or standard units • Compare and order lengths using long/short, longer/shorter, tall/short, double/half • Compare and order masses using heavy/light, heavier than, lighter than • Compare and order capacities using full/empty, more than, less than, half, half full, quarter • Compare and order times using quicker, slower, earlier, later • Select appropriate language when making comparisons • Solve practical problems involving length, height, mass, volume • Solve practical problems involving time • Recognise the coins: 1p, 2p, 5p, 10p, 20p, 50p, £1 and £2 • Read and say amounts of money using the coins 1p, 2p, 5p, 10p, 20p, 50p • Recognise the coins: £1 and £2 • Read and say amounts of money using the coins £1 and £2 • Count, say and record amounts of money using the coins 1p, 2p, 5p, 10p, 20p, 50p, £1 and £2 • Recognise the notes: £5 and £10 • Read and say amounts of money using the notes £5 and £10 • Solve simple problems involving money
Prerequisite	NCETM – Ready to Progress
<ul style="list-style-type: none"> ✓ Enjoys filling and emptying containers ✓ Beginning to categorise objects according to properties such as shape or size. ✓ Begins to use the language of size. ✓ Beginning to talk about the shapes of everyday objects, e.g. ‘round’ and ‘tall’. ✓ Can describe their relative position such as ‘behind’ or ‘next to’. ✓ Orders two or three items by length or height. ✓ Orders two items by weight or capacity. 	<p>Use their experience of standard units to make realistic estimates, answering questions such as:</p> <ul style="list-style-type: none"> ○ Is the table taller or shorter than a metre? ○ Is this doll taller or shorter than one of the class rulers? ○ Does this bottle hold more or less than the litre jug? ○ Which of these things do you think will weigh less than a kilogram? <p>Use standard units to measure and compare objects. For example, they place metre sticks end-to-end to find out how much wider the hall is than the classroom. They use a litre jug to measure how much more the washing-up bowl holds than the cola bottle.</p> <p>recognise and know the value of different denominations of coins and notes</p> <ul style="list-style-type: none"> • Distinguish coins by sorting them and start to understand their value. They begin to recognise that some coins have a greater value than others, and will buy more: for example, 2p is worth more than 1p; 5p is worth more than 2p; £2 is worth more than £1. They play money games and collect 1p or 2p coins to the value of 10p and begin to count up ‘how much this is altogether’. They extend their activities in the classroom shop, paying for items that cost 1p, 3p, 5p, 7p or 9p using only 2p coins, and receiving the appropriate amount of change in 1p coins. They use coins to help them to respond to questions such as: <ul style="list-style-type: none"> ○ Michael had £5. He spent £3. How much did he have left? ○ Rosie had a 10p coin. She spent 3p. How much change did she get? ○ How much altogether is 1p and 2p and 5p? ○ Sunita spent 5p and 6p on toffees. What did she pay altogether? ○ Chews cost 2p each. How much do three chews cost? • An apple costs 12p. Which two coins would pay for it? What combinations of 3 coins would pay for it?

Reasoning opportunities and probing questions	Mathematical Language	Possible misconceptions
<ul style="list-style-type: none"> Convince met that you can use metre sticks to measure the mass of a bag of apples Show me a minute (in silence!) Show me an item longer than this ruler. And another, and another ... Show me an item heavier than this book. And another, and another Kenny thinks that 'the larger the size of the coin, the greater the value of the coin'. Do you agree with Kenny? What is the same and what is different: <i>2p coin, 5p coin, 10p coin, 20p coin</i>? Always/Sometimes/Never: Coins are circular. 	Measure Length, height, distance Mass, weight Time Capacity, volume Long, short, longer, shorter, tall, taller Heavy, light, heavier, lighter Full, empty, half full Quicker, slower, earlier, later More than, greater than, less than Double, half, quarter Hour, minutes, second Ruler Container Order, Compare Money Coin Note	<ul style="list-style-type: none"> Some pupils may think that cm (for example) is a unit for measuring anything Some pupils may think that all times have to be measured in minutes Some pupils may think that the straight line is longer than the wiggly line  Some pupils may think that the larger the size of the coin, the greater the value of the coin, for example, a 2p coin is greater in value than a 5p coin. Some pupils may think that all coins are circular. Some pupils may think that there all £1 and £2 are notes not coins.

Geometry

Key concepts (National Curriculum Statements)

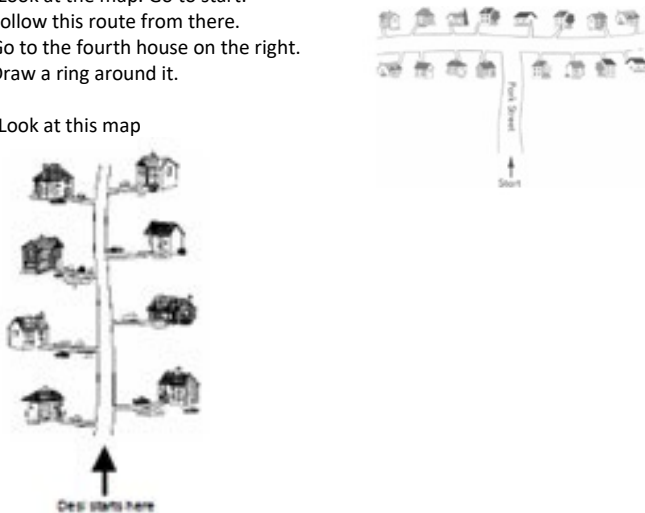


Pupils should be taught to:

- recognise and name common 2-D and 3-D shapes, including:
 - 2-D shapes [for example, rectangles (including squares), circles and triangles]
 - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].
- describe position, direction and movement, including whole, half, quarter and three-quarter turns.

Notes and guidance (non-statutory)

- Pupils handle common 2-D and 3-D shapes, naming these and related everyday objects fluently. They recognise these shapes in different orientations and sizes, and know that rectangles, triangles, cuboids and pyramids are not always similar to each other.
- Pupils use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.
- Pupils make whole, half, quarter and three-quarter turns in both directions and connect turning clockwise with movement on a clock face.

Possible Themes	Key learning points
<ul style="list-style-type: none"> Investigate mathematical language to describe movement 	<ul style="list-style-type: none"> Use mathematical language to describe position Use mathematical language to describe movement along a straight line Use mathematical language to describe a turn, including whole and half turns Use mathematical language to describe a turn, including quarter turns Use mathematical language to describe a turn, including three-quarter turns Describe position, direction and movement, including whole turns Describe position, direction and movement, including half turns Describe position, direction and movement, including quarter and three-quarter turns

Prerequisite	NCETM – Ready to Progress	
<ul style="list-style-type: none"> ✓ Describe position using language such as ‘behind’ or ‘next to’ ✓ Know the language of half and quarter 	<p>Pupils should be taught to describe position, direction and movement, including whole, half, quarter and three-quarter turns.</p> <ul style="list-style-type: none"> ➤ Look at the map. Go to start. Follow this route from there. Go to the fourth house on the right. Draw a ring around it. ➤ Look at this map  <p>Desi's house is the 2nd on the left. Tick (✓) it.</p>	
Reasoning opportunities and probing questions	Mathematical Language	Possible misconceptions
<ul style="list-style-type: none"> • Show me a quarter turn. An another, and another ... • Convince me this is a quarter turn:  <ul style="list-style-type: none"> • Jenny walks four steps forward, turns a quarter turn clockwise and walks 2 steps forward. Lenny says ‘if Jenny now walks 2 steps backwards, turns a quarter turn clockwise and walks four steps backwards, she will return to the start.’ Do you agree with Kenny? Explain your answer. • Kenny says, ‘A turn of four quarters turns is the same as doing nothing at all’. Do you agree with Kenny? Explain why. • NCETM: Geometry: Position Direction and Movement Reasoning 	<ul style="list-style-type: none"> Position Direction Top, middle, bottom On top of In front of Above Between Around, Near, Close, Far Up, Down Inside, Outside Forwards, Backwards Left, Right Half turn, Quarter turn, Three-quarters turn Straight Line Clockwise 	<ul style="list-style-type: none"> • Some pupils may think that quarter turns have to look like this:  <ul style="list-style-type: none"> • Some pupils may have difficulty remembering left and right • Some pupils may get confused with ‘clockwise’