Year 4 units

View interactive sequence online

1 Review of column addition and subtraction	**2** Secure place value to 1000: apply to addition and subtraction: multiples of 100	**3** Calculation and conversion of measures
4 Comparing, ordering and rounding 4-digit numbers	**5** Column addition and subtraction with 4-digit numbers	**6** Perimeter
7 Represent counting in threes and sixes as the 3 and 6 times tables	**8** Relationship between the 3 and 6 times tables and tests of divisibility	**9** Represent counting in nines as the 9 times table
10 Relationship between the 3 and 9 times tables	**11** 7 times table: odd and even patterns, square numbers and tests of divisibility	**12** Understand and represent multiplicative structures
13 Apply the distributive law to multiplication	**14** Understand what happens when a number is multiplied or divided by 10 and 100	**15** Coordinates

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Review of fractions

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1. Review of column addition and subtraction

Year 4

Go to unit resources

Threads

- Number
- Number: Addition and Subtraction
- Number: Place value
- Statistics

Unit description

In this unit pupils will revisit column addition with regrouping and column subtraction with exchanging to solve problems.

Why this, why now?

This unit gives pupils the chance to review and secure column and addition strategies, revisiting place value, estimating and ensuring that they are using the most efficient strategy in a given situation. They have the opportunity to apply known number facts and apply their knowledge to solve problems. This unit makes sure that pupils are ready to work with 4-digit numbers in future units.

Lessons in unit

1. Review column addition and identify the addends and sum
2. Review and use knowledge of place value to correctly lay out column addition
3. Review adding 2-digit numbers using column addition without regrouping
4. Review adding 3-digit numbers using column addition without regrouping
5. Use column addition to solve problems in different contexts
6. Review using column addition to add 2- and 3-digit numbers by regrouping ones
7. Review using column addition to add 2- and 3-digit numbers by regrouping tens
8. Review using column addition with regrouping in the ones and tens columns
9. Review using known facts and strategies to accurately and efficiently use and check column addition
10. Use knowledge of column addition to solve problems in a range of contexts
11. Review identifying the minuend and subtrahend in column subtraction
12. Review using column subtraction to subtract without regrouping
13. Review using column subtraction with regrouping from tens to ones
14. Review using column subtraction with regrouping from hundreds to tens
15. Decide on the most efficient subtraction strategy, including column subtraction

Prior knowledge requirements

- Use column methods with 2- and 3-digit numbers

- Understand regrouping and borrowing
- Estimate answers and check for reasonableness

2. Secure place value to 1000: apply to addition and subtraction: multiples of 100

Year 4

Go to unit resources

Threads

- Number
- Number: Addition and Subtraction
- Number: Place value
- Statistics

Unit description

In this unit pupils will explain how many tens, hundreds and ones 1,000 is composed of. They will use different strategies to add and subtract multiples of 100.

Why this, why now?

In this unit, pupils extend their understanding of place value to include 4-digit numbers. They explore the composition of numbers to 2,000 and use different strategies to add and subtract multiples of 100. This unit prepares pupils for working with 4-digit numbers in future units.

Lessons in unit

1. Explain how many hundreds, tens and ones 1,000 is composed of
2. Use place value to compose numbers up to 2,000 using hundreds, tens and ones
3. Use different strategies to add multiples of 100
4. Use different strategies to subtract multiples of 100
5. Use addition and subtraction strategies to solve problems with multiples of 100

Prior knowledge requirements

- Partition numbers into hundreds, tens and ones
- Recognise digit value to 1,000 or beyond
- Use number lines and base-10 apparatus

3. Calculation and conversion of measures

Year 4

Go to unit resources

Threads

- Geometry and Measure
- Number
- Number: Addition and Subtraction
- Number: Multiplication and division

Unit description

In this unit pupils will use knowledge of 1000 to explain common measure conversions and solve problems.

Why this, why now?

This unit provides the opportunity for pupils to explore numbers to 2,000 in the context of measures. They deepen their understanding of the composition of 4-digit numbers in the context of measures and statistics giving confidence to move on to other work involving 4-digit numbers.

Lessons in unit

1. Use knowledge of 1,000 to explain common measure conversions
2. Partitioning 1,000 in the context of measures
3. Partitioning 1,000 and 2,000 in the context of measures
4. Use knowledge of measure conversions to interpret graphs and tables
5. Use efficient strategies and common measure conversions to solve problems in a range of contexts

Prior knowledge requirements

- Identify and use appropriate units
- Estimate and compare quantities
- Convert between common units

4. Comparing, ordering and rounding 4-digit numbers

Year 4

Go to unit resources

Threads

- Number
- Number: Place value
- Statistics

Unit description

¬†In this unit pupils will compare and order 4-digit numbers. They will learn what rounding is and will round 4-digit numbers to the nearest thousand, hundred and ten.

Why this, why now?

This unit provides pupils with the chance to explore 4-digit place value, using their knowledge to decompose, compare, order and round numbers. They round 4-digit numbers to the nearest thousand, hundred and ten. In future units, they apply this knowledge and understanding when calculating with 4-digit numbers.

Lessons in unit

1. Use place value and number facts to decompose 4-digit numbers in different ways
2. Compare and order 4-digit numbers
3. Explain what rounding is and round a 4-digit number to the nearest thousand
4. Round a 4-digit number to the nearest hundred and ten
5. Round a 4-digit number to the nearest thousand, hundred and ten

Prior knowledge requirements

- Understand place value up to 1000
- Compare and order numbers using digit value
- Round numbers to the nearest 10 or 100

5. Column addition and subtraction with 4-digit numbers

Year 4

Go to unit resources

Threads

- Number
- Number: Addition and Subtraction
- Number: Place value

Unit description

In this unit pupils will consolidate column addition with regrouping and column subtraction with exchanging to solve problems. They will use known facts and strategies to accurately and efficiently calculate and check.

Why this, why now?

This unit extends pupil's understanding of column addition and subtraction to working with 4-digit numbers. They will also consider strategies to improve efficiency when solving calculations and consider the composition of 4-digit numbers. This gives pupils a range of ways of thinking about numbers, addition and subtraction that they can apply to future learning.

Lessons in unit

1. Add up to 3 four-digit numbers using column addition
2. Subtract 4-digit numbers using column subtraction
3. Pupils use strategies to make solving calculations more efficient
4. Explain how many '500s' and '250s', 1,000 is composed of
5. Explain how many '100s' and '200s', 1,000 is composed of

Prior knowledge requirements

- Understand place value to 1000
- Use column methods for 2- and 3-digit numbers
- Recall number facts and number bonds

6. Perimeter

Year 4

Go to unit resources

Threads

- Geometry and Measure
- Number: Addition and Subtraction

Unit description

In this unit pupil will learn perimeter as the distance around the edge of a 2D shape. They will learn perimeter is measured in units of length found by counting units and by calculating by adding the side lengths of a 2D shape.

Why this, why now?

In this unit, pupils explore the concept of the perimeter of a shape. They count and then use measurement to work out the side lengths. The unit looks at regular and irregular shapes and pupils identify where multiplication can be used to calculate area. They calculate missing side lengths when the perimeter is known and understand that different shapes can have the same perimeter. A good understanding of perimeter will reduce the risk of confusion when the concept of area is taught.

Lessons in unit

1. Know that a regular polygon has sides that are the same length and angles that are the same size
2. Know that the perimeter is the distance around a 2D shape
3. Understand that different shapes can have the same perimeter
4. Know that perimeter is measured in units of length and can be found by counting or measuring units
5. Know that perimeter can be calculated by adding together the side lengths of a 2D shape
6. Know that the perimeter of a rectangle can be calculated by addition and multiplication
7. Know that unknown side lengths can be calculated from the perimeter and known side lengths
8. Understand that the perimeter of a regular polygon can be calculated by multiplication
9. Calculate the side length of a regular polygon by division where the perimeter is known
10. Solve problems involving the perimeter and side lengths of polygons

Prior knowledge requirements

- Measure side lengths
- Understand the concept of distance around a shape
- Use addition to calculate total length

7. Represent counting in threes and sixes as the 3 and 6 times tables

Year 4

Go to unit resources

Threads

- Number
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will represent counting in 3s as the 3-times table explaining the relationship between adjacent multiples of 3 and represent counting in 6s as the 6-times table explaining the relationship between adjacent multiples of 6.

Why this, why now?

This unit looks in depth at the 3- and 6-times tables. Pupils have the opportunity to rehearse the times table facts whilst also deepening their understanding of multiplication and how multiples are related. This unit prepares them for looking at the relationship between the 3- and 6-times tables and the introduction of the 9 times table.

Lessons in unit

1. Represent counting in threes as the 3 times table
2. Explain the relationship between adjacent multiples of three
3. Represent counting in sixes as the 6 times table
4. Explain the relationship between adjacent multiples of six
5. Solve problems involving multiples of 6

Prior knowledge requirements

- Count in equal steps
- Recall relevant multiplication facts
- Use arrays or repeated addition

8. Relationship between the 3 and 6 times tables and tests of divisibility

Year 4

Go to unit resources

Threads

- Number
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will explain the relationship between multiples of 3 and of 6. They will use this relationship and tests of divisibility for the 3- and 6-times tables to solve problems.

Why this, why now?

This unit gives further opportunity for pupils to rehearse the facts for the 3- and 6-times tables whilst also exploring the relationship between the times tables. They also look at the tests of divisibility for 3 and 6 and use their knowledge of the facts along with these tests to solve problems. This secures their knowledge of the times table facts and prepares for the 9-times table and it's links with the 3-times table.

Lessons in unit

1. Use knowledge of the 3 and 6 times tables to solve problems
2. Explain the relationship between multiples of three and six
3. Use knowledge of the relationships between the 3 and 6 times tables to solve problems
4. Use the divisibility rules to find multiples of 3
5. Use divisibility rules for multiples of 6

Prior knowledge requirements

- Recall multiplication facts for the 3 and 6 times tables
- Understand the concept of doubling and its link to multiples
- Identify patterns in number sequences and apply divisibility rules

9. Represent counting in nines as the 9 times table

Year 4

Go to unit resources

Threads

- Number
- Number: Multiplication and division

Unit description

In this unit pupils will represent counting in 9s as the 9x table explaining the relationship between adjacent multiples of 9. They will use known facts from the 10x table to solve problems involving the 9x table.

Why this, why now?

This unit uses the same language and structures as have been used for other times tables to introduce and rehearse the facts for the 9-times table. Pupils look at the link to the 10-times table, drawing on and deepening their understanding of the structures of multiplication. This unit prepares them to look at the link between the 3- and 9-times tables.

Lessons in unit

1. Represent counting in nines as the 9 times table
2. Explain the relationship between adjacent multiples of nine
3. Solve problems involving adjacent multiples of nine
4. Use known facts from the 10 times table to solve problems involving the 9 times table
5. Use knowledge of the 9 times table to solve problems

Prior knowledge requirements

- Read time to the hour and half hour
- Understand 12-hour clock notation
- Convert between hours and minutes

10. Relationship between the 3 and 9 times tables

Year 4

Go to unit resources

Threads

- Number
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will explain the relationship between multiples of 3 and multiples of 9 and use it, along with the tests of divisibility for the 3-, 6- and 9-times tables, to solve problems.

Why this, why now?

This unit gives further opportunity for pupils to rehearse and recall facts for the 3- and 9-times tables as they explore the links between the times tables. They also link the tests of divisibility for the 3-, 6- and 9-times tables and use these, along with their knowledge of the number facts, to solve problems.

Lessons in unit

1. Explain the relationship between multiples of three and multiples of nine
2. Explain the relationship between pairs of 3 and 9 times table facts that have the same product
3. Solve problems using the relationship between 3 and 9 times table
4. Solve problems using divisibility rules for divisors of 3, 6 and 9
5. Solve problems involving the 3, 6 and 9 times tables

Prior knowledge requirements

- Recall the 3 times table
- Use patterns to derive the 9 times table
- Identify and apply divisibility rules and patterns

11. 7 times table: odd and even patterns, square numbers and tests of divisibility

Year 4

Go to unit resources

Threads

- Number
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will represent counting in sevens as the 7-table, explaining the relationship between adjacent multiples. The unit also looks at odd and even patterns in times tables and identifies square numbers.

Why this, why now?

This unit introduces and rehearses the facts for the 7-times table. Pupils explore the odd and even patterns in times tables and use this to support problem solving. They identify and represent square numbers as a particular set of multiplication facts. Pupils bring together their times table knowledge, tests of divisibility and new knowledge of square numbers to solve problems. These facts will support the coming units exploring multiplication structures.

Lessons in unit

1. Represent counting in sevens as the 7 times table
2. Explain the relationship between adjacent multiples of seven
3. Use known facts from the 2, 5 and 6 times tables to solve problems involving the 7 times table
4. Use knowledge of the 7 times table to solve problems
5. Identify patterns of odd and even numbers in the times tables
6. Use patterns of odd and even numbers in the times tables to solve problems
7. Represent a square number
8. Identify and use square numbers to solve problems
9. Use divisibility rules for 3, 4, 6 and 8 times tables to solve problems
10. Use divisibility rules for 2, 3, 4, 5, 6, 8 and 10 times tables to solve problems

Prior knowledge requirements

- Read time to the hour and half hour
- Understand 12-hour clock notation
- Convert between hours and minutes

12. Understand and represent multiplicative structures

Year 4

Go to unit resources

Threads

- Number
- Number: Multiplication and division

Unit description

In this unit pupils will explain how each part of a multiplication and division equation relates to a story. They will partition one of the factors in a multiplication equation in different ways using representations.

Why this, why now?

In this unit, pupils look in depth at how multiplication equations relate to the situations and problems they represent. Pupils explain what each factor in an equation represents both in multiplication and division contexts. They partition one of the factors in a multiplication equation and consider the most efficient way to apply this to solve problems. This will lead to work on the distributive law which underpins partitioning strategies for multiplication and division.

Lessons in unit

1. Explain what each factor represents in a multiplication equation
2. Explain how each part of a multiplication and division equation relates to a story
3. Explain where zero can be part of a multiplication or division expression and the impact it has
4. Partition one of the factors in a multiplication equation using representations
5. Explain which is the most efficient factor to partition to solve a multiplication problem

Prior knowledge requirements

- Recognise equal groups and repeated addition
- Use arrays and skip counting to model multiplication
- Understand multiplicative comparison (e.g., "twice as many")

13. Apply the distributive law to multiplication

Year 4

Go to unit resources

Threads

- Number
- Number: Multiplication and division

Unit description

In this unit pupils will use knowledge of the distributive law to calculate products beyond known times tables facts and relate this to partitioning one of the factors.

Why this, why now?

This unit explores the use of common factors in two-part problems to solve them efficiently. Pupils identify when there is a common factor and they can apply the distributive law and when there isn't. They also use the strategy to break down a factor in order to calculate products beyond their times table knowledge. This informal mental strategy will underpin more formal methods of multiplication in the future.

Lessons in unit

1. Use knowledge of the distributive law to solve two part problems
2. Use knowledge of the distributive law to solve further two-part problems
3. Use knowledge of the distributive law to calculate products using known times tables
4. Use knowledge of the distributive law to calculate products beyond known times tables
5. Use knowledge of the distributive law to solve problems in different contexts

Prior knowledge requirements

- Recall multiplication facts to 12 _ 12
- Use arrays and grouping to model multiplication
- Partition numbers to simplify calculations

14. Understand what happens when a number is multiplied or divided by 10 and 100

Year 4

Go to unit resources

Threads

- Number
- Number: Fractions
- Number: Place value

Unit description

In this unit pupils will explain the relationship between multiplying and dividing a number by 10 and multiples of 10.

Why this, why now?

In this unit, pupils extend their knowledge of multiplication as scaling to understand that multiplying by 10 makes a number ten times the size and dividing by 10 makes it one-tenth times the size. They explain the role of zero as a placeholder when calculating with whole numbers and multiplying and dividing by 10 and 100. Pupils also explore what happens to the product and quotient when factors and dividends are made 10 or 100 times the size and apply this thinking to their multiplication facts.

Lessons in unit

1. Explain the relationship between multiplying a number by 10 and multiples of 10
2. Understand that multiplying by 10 makes a number ten times the size
3. Use place value to explain placing a zero after the final digit when we multiply whole numbers by 10
4. Understand that dividing a number by 10 makes it one-tenth times the size
5. Use place value to explain removing the zero in the ones from a multiple of ten when we divide by 10
6. Explain the relationship between multiplying a number by 100 and multiples of 100
7. Explain the use of placeholders when multiplying whole numbers by 100
8. Explain the removal of placeholders when dividing whole numbers by 100
9. Use knowledge of the composition of 100 to multiply and divide by 100 in different ways
10. Explain how making a factor 10 times the size affects the product
11. Explain how making the dividend 10 times the size affects the quotient
12. Explain how making a factor 100 times the size affects the product
13. Explain how making the dividend 100 times the size affects the quotient
14. Scale known multiplication facts by 100
15. Scale division facts derived from multiplication facts by 100

Prior knowledge requirements

- Understand place value of digits in whole numbers
- Recognise patterns when multiplying by 10
- Identify how digit position changes with multiplication/division

15. Coordinates

Year 4

Go to unit resources

Threads

- Geometry and Measure
- Number: Place value

Unit description

In this unit pupils will give directions from one position to another on a grid and move objects including polygons on a grid according to directions, and mark the new position. They will describe and draw polygons specified by translations.

Why this, why now?

This unit develops the position and direction work from previous units and uses coordinates to describe positions of points and polygons. Pupils plot and translate shapes in the first quadrant. The unit provides the opportunity to review the properties of polygons and to apply new knowledge of coordinates. This unit leads to coordinates beyond the first quadrant and to considering reflections as well as translations.

Lessons in unit

1. Give directions from one position to another on a grid
2. Move objects including polygons on a grid according to directions and mark the new position
3. Describe translations of polygons drawn on a square grid
4. Draw polygons specified by translations
5. Mark the position of points specified by coordinates in the first quadrant of a coordinate grid
6. Write coordinates for already marked points in the first quadrant of a coordinate grid
7. Draw polygons specified by coordinates in the first quadrant
8. Complete polygons with missing coordinates
9. Translate polygons in the first quadrant
10. Solve problems involving marking and translating points in the first quadrant on a coordinate grid

Prior knowledge requirements

- Read and plot values on a number line
- Understand vertical and horizontal directions
- Locate positions on a simple grid using (x, y) format

16. Review of fractions

Year 4

Go to unit resources

Threads

- Number
- Number: Fractions

Unit description

In this unit pupils will identify equal parts when they do not look the same related to equivalence. They will construct a whole when given a part and the number of parts.

Why this, why now?

This unit gives pupils to review and secure understanding of previous learning in fractions identifying equal parts and explaining the size of a part in relation to the whole. This understanding is needed before the pupils move on to fractions greater than one.

Lessons in unit

1. Secure identifying a whole and the parts that make it up
2. Identifying the number of equal or unequal parts in a whole
3. Secure identifying equal parts when they do not look the same
4. Review explaining the size of the part in relation to the whole
5. Review constructing a whole when given a part and the number of parts

Prior knowledge requirements

- Recognise and name unit and non-unit fractions
- Compare and order simple fractions
- Use bar models and number lines to represent fractions

17. Composition of fractions greater than one

Year 4

Go to unit resources

Threads

- Number
- Number: Fractions

Unit description

In this unit pupils will compose and decompose quantities made of whole numbers and fractional parts.

Why this, why now?

This unit introduces pupils to fractions greater than one. They will explain how mixed numbers are composed and rehearse composing and decomposing them into the whole number and fraction parts. Pupils will solve problems and label a range of number lines. This will prepare pupils for comparing and ordering mixed numbers.

Lessons in unit

1. Quantities that are made up of both whole numbers and a fractional part
2. Explain how a mixed number is composed
3. Compose and decompose mixed numbers
4. Solve problems involving mixed numbers
5. Accurately label a range of number lines

Prior knowledge requirements

- Recognise unit and non-unit fractions
- Understand how to add and subtract fractions with the same denominator
- Convert between improper fractions and mixed numbers

18. Compare and order mixed numbers and position on a number line

Year 4

Go to unit resources

Threads

- Number
- Number: Fractions

Unit description

In this unit pupils will estimate the position of numbers on a number line using fraction sense. They will compare and order mixed numbers using fraction sense when the whole number and the numerator of the fractional part is the same.

Why this, why now?

This unit deepens understanding of fractions and mixed numbers. Pupils compare mixed numbers when the fractional parts are different and when the denominators of the fractional parts are different. This prepares pupils for calculating with mixed numbers in future lessons.

Lessons in unit

1. Identify numbers on marked but unlabelled number lines
2. Estimate the position of a number on a number line using fraction sense
3. Compare and order mixed numbers using fraction sense
4. Compare mixed numbers when the numerators of fractional parts are different
5. Compare mixed numbers when the denominators of fractional parts are different

Prior knowledge requirements

- Recognise and order proper and improper fractions
- Understand how to place numbers on a number line
- Convert between improper fractions and mixed numbers

19. Addition and subtraction of fractions and mixed numbers (within a whole)

Year 4

Go to unit resources

Threads

- Geometry and Measure
- Number
- Number: Fractions
- Statistics

Unit description

In this unit pupils will make efficient choices about the order they solve an addition and subtraction problem in.

Why this, why now?

This unit introduces pupils to calculating with mixed numbers, starting within a whole. They will then begin to convert numbers of quarters and fifths into mixed numbers and improper fractions in preparation for converting any mixed number into an improper fraction and vice versa.

Lessons in unit

1. Efficiently solve addition problems (within a whole)
2. Efficiently solve subtraction problems (within a whole)
3. Express an amount of quarters as a mixed number and an improper fraction.
4. Express an amount of fifths as a mixed number and an improper fraction.
5. Express a quantity as a mixed number and an improper fraction

Prior knowledge requirements

- Convert between improper and mixed numbers
- Add and subtract fractions with like denominators
- Represent calculations using number lines or bar models

20. Convert improper fractions to mixed numbers and vice versa

Year 4

Go to unit resources

Threads

- Number
- Number: Fractions

Unit description

In this unit pupils will express and convert a quantity from an improper fraction to a mixed number and explain how a mixed number is converted into an improper fraction.

Why this, why now?

This unit extends understanding of mixed numbers and pupils explain how to convert improper fractions to mixed numbers and mixed numbers to improper fractions. This skill will be applied when they consider efficient strategies for adding and subtracting mixed numbers.

Lessons in unit

1. Convert a number of quarters from an improper fraction to a mixed number
2. Convert a number of fifths from an improper fraction to mixed number
3. Explain how an improper fraction is converted into a mixed number
4. Explain how a mixed number is converted into an improper fraction
5. Solve problems involving converting between mixed numbers and improper fractions

Prior knowledge requirements

- Recognise improper and mixed number forms
- Use division to convert between forms
- Represent fractions on number lines or bar models

21. Efficient strategies for adding and subtracting mixed numbers (crossing a whole)

Year 4

Go to unit resources

Threads

- Number
- Number: Fractions

Unit description

In this unit pupils will add mixed numbers. They will subtract a proper fraction from a mixed number and subtract a mixed number from a mixed number explaining which strategy is most efficient.

Why this, why now?

In this unit, pupils put together their understanding of mixed numbers and converting between them and improper fractions, to add and subtract mixed numbers when crossing the whole. This thinking will be applied and developed when calculating with fractions in future units.

Lessons in unit

1. Add mixed numbers crossing the whole
2. Subtract a proper fraction from a mixed number crossing the whole
3. Subtract a mixed number from a mixed number
4. Choose efficient approaches when subtracting mixed numbers
5. Solve problems involving addition and subtraction of mixed numbers

Prior knowledge requirements

- Recall number facts and sequences
- Use place value understanding
- Apply basic operations in context

22. Properties of 2D and 3D shapes and symmetry

Year 4

Go to unit resources

Threads

- Geometry and Measure

Unit description

In this unit pupils will complete and compose symmetrical shapes from two congruent shapes and investigate lines of symmetry in 2D shapes.

Why this, why now?

This unit revisits known properties of shapes and extends pupils' knowledge to identify, sort and classify different types of triangles. They then investigate symmetry by creating and completing patterns and looking at symmetry in 2D shapes. This will prepare pupils for future work with 2D shapes including area.

Lessons in unit

1. Identify different types of triangle
2. Explore, sort and classify triangles
3. Complete a symmetrical pattern
4. Explore symmetry by joining two identical shapes
5. Investigate lines of symmetry in 2D shapes by folding
6. Find lines of symmetry in 2D shapes
7. Reflect polygons in a line of symmetry
8. Reflect polygons that are dissected by the line of symmetry
9. Diagonal lines of symmetry
10. Investigate symmetry and symmetrical patterns

Prior knowledge requirements

- Identify lines of symmetry
- Reflect shapes across an axis
- Classify shapes using symmetry

23. Money: apply efficient strategies when calculating with money

Year 4

Go to unit resources

Threads

- Geometry and Measure
- Number: Addition and Subtraction
- Number: Fractions
- Number: Multiplication and division

Unit description

In this unit pupils will explain represent and compare whole pounds and pence. They will convert quantities of money between pounds and pence and use the most efficient and reliable strategy to find the change.

Why this, why now?

This unit allows pupils to apply decimal place value in a different context and to use calculation strategies to convert between pounds and pence, calculate totals and find change from a given amount. The evaluate and decide on the most efficient and reliable strategies for adding values and giving change. Having worked with length and money, pupils will go on in the future to convert between different units of measure, using their knowledge of place value.

Lessons in unit

1. Explain and represent whole pounds as a quantity of money
2. Explain and represent whole pounds and pence as a quantity of money
3. Explain how to compare amounts of money without converting
4. Convert quantities of money between pounds and pence
5. Use knowledge of addition to add commonly used prices efficiently
6. Use knowledge of subtraction to calculate change when paying with whole pounds or notes
7. Use and explain the most efficient strategies when adding quantities of money
8. Use and explain the most efficient strategies when subtracting quantities of money
9. Calculate change when purchasing several items
10. Solve a range of problems, including finding change

Prior knowledge requirements

- Recognise coin and note values
- Use symbols £ and p appropriately
- Apply number facts to money contexts

24. Time: Convert between 12 and 24 hour clocks: analogue and digital

Year 4

Go to unit resources

Threads

- Geometry and Measure

Unit description

In this unit pupils will read, write and convert time between analogue and digital 12- and 24-hour clocks. They will solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.

Why this, why now?

This unit reviews and develops previous work on time to include reading digital time and converting between times given in 12 and 24 hour formats. Pupils use their knowledge of writing, telling and converting between units of time to solve problems. This will prepare them for calculating with and converting between units of time to solve problems in the future.

Lessons in unit

1. Read the time on a 12 and 24 hour digital clock
2. Convert between times given in 12 and 24 hours
3. Convert from hours to minutes and minutes to seconds
4. Convert from days to weeks and months to years
5. Solve problems involving writing, telling and converting the time

Prior knowledge requirements

- Read time to the hour and half hour
- Understand 12-hour clock notation
- Convert between hours and minutes

25. Division with remainders

Year 4

Go to unit resources

Threads

- Number
- Number: Multiplication and division

Unit description

In this unit pupils will interpret a division story with a remainder representing it with an equation. They will explain how the remainder relates to the divisor.

Why this, why now?

This unit develops pupils' understanding of multiplication and division to include remainders. They will explain how situations are represented by division equations including sharing and grouping structures. Pupils will also explain how the remainder relates to the divisor in an equation and what to do with the remainder in the context of different problems. This understanding will be developed when they learn more formal division strategies.

Lessons in unit

1. Represent division by grouping with multiplication and addition equations
2. Solve division problems involving grouping, including those with remainders
3. Represent division by sharing with equations
4. Solve division problems involving sharing, including those with remainders
5. Use multiplication facts to answer division questions
6. Explain how the remainder relates to the divisor in a division equation
7. Identify when there will be a remainder
8. Use knowledge of division equations and remainders to solve problems
9. Decide what to do with the answer to a division calculation to solve a problem
10. Use knowledge of division to solve problems

Prior knowledge requirements

- Understand division as sharing and grouping
- Recall multiplication and division facts
- Recognise when a number cannot be divided exactly