

Block by block Yearly Overview

Year 4

TERM 1

Using and Applying

- Solve one and two step problems involving whole numbers and unit fractions, money or measures, including time and temperature
- Identify the known and to-be-found information in a problem; use number sentences and diagrams to support thinking; present the solution in the context of the problem
- Present solutions to problems in an organised way; explain decisions, methods and results using mathematical symbols.
- Use patterns, properties of and relationships between numbers or shapes to determine and describe similarities and differences. Make inferences from given information and frame an hypothesis to test further
- Solve one and two step problems involving whole numbers and unit fractions, money or measures, including time and temperature
- Identify the known and to-be-found information in a problem; use number sentences and diagrams to support thinking; present the solution in the context of the problem
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- Use patterns, properties of and relationships between numbers or shapes to determine and describe similarities and differences. Make inferences from given information and frame an hypothesis to test further

Block A Term 1

Place Value

- Count from 0 in multiples of 4 and 8 (0-1000)
- Compare and order numbers up to 1000
- Read and write numbers up to 1000 in numerals and words and be confident about their place value
- Solve number problems and practical problems involving numbers 0-1000

Addition and Subtraction

- Add and subtract numbers mentally including:
 - three digit and ones
 - three digit and tens
 - three digit and hundreds
 - number bonds to 20 and 100

- Add and subtract numbers with up to 3 digits, beginning to use the efficient written methods of columnar addition and subtraction
- Estimate (approximate by rounding) the answer to a calculation and use the inverse operations to check answers
- Solve problems, including missing number problems using number facts, place value and more complex addition and subtraction

Measurement

- Measure and compare, add and subtract lengths (mm, cm, m, km) **Be able to differentiate between different units of measure. Know how many g in a kg, ml in a l, mm and cm in a m and m in a km**
- Measure the perimeter of simple 2D shapes
- Add and subtract amounts of money to give change, using both £ and p in practical contexts

Statistics

- Interpret and present discrete and continuous data using appropriate graphical methods including bar charts and time graphs
- Solve one step and two step questions such as “How many more?” “How many fewer?” using information presented in scaled bar charts, pictograms and tables

Block B Term 1

Place Value

- Count from any number in multiples of 50 and 100 (0-1000)
- Find 10 or 100 more or less than a given number (0-1000)
- Solve number problems and practical problems involving numbers 0-1000

Multiplication and Division

- Recall and use multiplication and division facts for the 2, 5, 10, 3, 4 and 8 x tables
- Write and calculate mathematical statements for \times and \div using the tables they know, including $TU \times U$, using mental and progressing to efficient written methods (**arrays/ repeated addition leading to grid**) Block B focus on multiplication,
- Solve problems, including missing number problems, involving \times and \div , including integer scaling problems and correspondence problems in which n objects are connected to m objects.
- *Multiply and divide one digit and two digit numbers by 10 or 100 and describe the effect.*

Fractions

- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one digit number s or quantities by 10.
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators

- Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- Solve problems that include all of the above

Geometry

- Draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them
- Identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn, and four a complete turn; identify whether angles are greater than or less than a right angle
- Recognise angles as a property of shape and associate angles with turning
- Identify horizontal and vertical lines and pairs of perpendicular and parallel lines

Block C Term 1

Place Value

- Count in multiples of 1000
- Find 1000 more or less than a given number
- Recognise the place value in a four digit number (thousands, hundreds, tens and ones)
- Solve number and practical problems with increasingly large numbers (0-9999)

Addition and Subtraction

- *Add or subtract mentally pairs of two digit whole numbers.*
- *Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100, 1000*
- *Identify the doubles of two digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves*
- Add and subtract numbers with up to 4 digits using the efficient written methods of columnar addition and subtraction where appropriate (3 digit + 3 digit, 3d+4d, 3d-2d, 3d-3d *Using number lines efficiently and moving onto partitioning when ready*)
- Estimate and use inverse operations to check answers to a calculation
- Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why

Measurement

- Convert between different units of measure using length (km to m, cm to m, mm to m) **Be able to read lengths off a scale**
- Estimate, compare and calculate different lengths
- Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m
- **Tell and write the time from an analogue clock, including using Roman numerals from I to XII (History link) and 12 and 24 hour clocks.**
- Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as am/pm, morning, afternoon, noon and midnight.
- Compare durations of events, e.g. to calculate time taken by particular events or tasks

Block D Term 1

Place Value

- Count in multiples of 1000 **forward and backwards from any number**
- Find 1000 more or less than a given number
- Order and compare numbers beyond 1000
- Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value

Multiplication and Division (focus on division)

- *Develop and use written methods to record, support and explain multiplication and division of two digit numbers by a one digit number, including division with remainders. (arrays/ repeated addition leading to grid)*
- **Recall and use multiplication and division facts for the 2, 5, 10, 3, 4 and 8 x tables**
- **Write and calculate mathematical statements for \times and \div using the tables they know, including TU \times U, using mental and progressing to efficient written methods**
- **Solve problems, including missing number problems, involving \times and \div , including integer scaling problems and correspondence problems in which n objects are connected to m objects.**
- *Multiply and divide one digit and two digit numbers by 10 or 100 and describe the effect.*

Fractions

- Recognise and write decimal equivalents of any number of tenths or hundredths (0-1000)
- Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ **(use measures as context)**
- Find the effect of dividing a one or two digit number by 10 and 100, identifying the value of the digits in the answer as units/ ones, tenths and hundredths
- Round decimals with one decimal place to the nearest whole number

Geometry and Shape

- Describe positions on a 2D grid as coordinates in the first quadrant
- Describe movements between position as translations of a given unit to the left/right and up/down
- Plot specified points and draw sides to complete a given polygon

TERM 2

Using and Applying

- Solve one and two step problems involving whole numbers and unit fractions, money or measures, including time and temperature
- Identify the known and to-be-found information in a problem; use number sentences and diagrams to support thinking; present the solution in the context of the problem
- Present solutions to problems in an organised way; explain decisions, methods and results using mathematical symbols.
- Use patterns, properties of and relationships between numbers or shapes to determine and describe similarities and differences. Make inferences from given information and frame an hypothesis to test further
- Solve one and two step problems involving whole numbers and unit fractions, money or measures, including time and temperature
- Identify the known and to-be-found information in a problem; use number sentences and diagrams to support thinking; present the solution in the context of the problem
- Present solutions to problems in an organised way; explain decisions, methods and results using mathematical symbols.
- Use patterns, properties of and relationships between numbers or shapes to determine and describe similarities and differences. Make inferences from given information and frame an hypothesis to test further

Block A Term 2

Place Value

- Count in multiples of 3 and 6 (and relate to \times and \div tables)
- Find 1000 more or less than a given number
- Recognise the place value in a four digit number (thousands, hundreds, tens and ones)
- Identify, represent and estimate numbers using different representations

Addition and Subtraction

- Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100, 1000
- Add and subtract numbers with up to 4 digits using the efficient written methods of columnar addition and subtraction where appropriate (2 digit + 4 digit, $3d+4d$, $4d-2d$, $4d-3d$ moving from expanded to carrying esp with addition)
- Estimate and use inverse operations to check answers to a calculation
- Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why

Measurement

- Convert between different units of measure using weight (kg to g) Be able to read weights from a scale
- Estimate, compare and calculate different weights
- Estimate, compare and calculate different money in £ and p

Block B Term 2

Place Value

- Count in multiples of 6 (and relate to \times and \div tables)
- Order and compare numbers beyond 1000
- Count backwards through zero to include negative numbers
- Solve number and practical problems with increasingly large numbers (0-9999)

Multiplication and division

- Recall multiplication and division facts up to 12×12 (2, 5, 10, 3, 4, 8, 6)
- Recognise and use factor pairs and commutatively in mental calculations
- Multiply two digit and three digit numbers by a one digit number using formal written layout. (grid)
- Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Fractions

- Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by 10
- Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non unit fractions where the answer is a whole number

Block C Term 2

Place Value

- Count in multiples of 9 (and relate to \times and \div tables)
- Find 1000 more or less than a given number
- Round any number to the nearest 10, 100, 1000
- Order and compare numbers beyond 1000

Addition and Subtraction

- Add and subtract numbers with up to 4 digits using the efficient written methods of columnar addition and subtraction where appropriate 2 digit + 4 digit, $3d+4d$, $4d-2d$, $4d-3d$ moving from expanded to carrying esp with addition
- Estimate and use inverse operations to check answers to a calculation
- Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why

Fractions

- Find the effect of dividing a one or two digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths
- Round decimals with one decimal place to the nearest whole number
- Compare numbers with the same number of decimal places up to two decimal places
- Solve simple measure and money problems involving fractions and decimals to two decimal places

Measurement

- Read, write and convert time between analogue and digital 12 and 24 hour clocks
- Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days

Statistics

- Interpret and present discrete data using bar charts and continuous data using line graphs
- *Compare the impact of representations where scales have intervals of differing step sizes*
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs

Block D Term 2

Place Value

- Count in multiples of 9 (and relate to \times and \div tables)
- Count backwards through zero to include negative numbers
- Solve number and practical problems with increasingly large numbers (0-9999)

Multiplication and Division

- Recall multiplication and division facts up to 12×12 (2, 5, 10, 3, 4, 8, 6)
- Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers (mental objective)
- Multiply two digit and three digit numbers by a one digit number using formal written layout (grid)
- Recognise and use factor pairs and commutatively in mental calculations

Fractions

- Identify, name and write equivalent fractions of a given fraction, including tenths and hundredths
- Round decimals with one decimal place to the nearest whole number
- Compare numbers with the same number of decimal places up to two decimal places

- Solve simple measure and money problems involving fractions and decimals to two decimal places

Measurement

- Read, write and convert time between analogue and digital 12 and 24 hour clocks
- Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days

Shape

- Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
- Identify acute and obtuse angles and compare and order angles up to two right angles by size
- Identify lines of symmetry in 2D shapes presented in different orientations.
- Complete a simple symmetric figure with respect to a specific line of symmetry

TERM 3

Using and Applying

- Solve one and two step problems involving whole numbers and unit fractions, money or measures, including time and temperature
- Identify the known and to-be-found information in a problem; use number sentences and diagrams to support thinking; present the solution in the context of the problem
- Present solutions to problems in an organised way; explain decisions, methods and results using mathematical symbols.
- Use patterns, properties of and relationships between numbers or shapes to determine and describe similarities and differences. Make inferences from given information and frame an hypothesis to test further
- Solve one and two step problems involving whole numbers and unit fractions, money or measures, including time and temperature
- Identify the known and to-be-found information in a problem; use number sentences and diagrams to support thinking; present the solution in the context of the problem
- Present solutions to problems in an organised way; explain decisions, methods and results using mathematical symbols.
- Use patterns, properties of and relationships between numbers or shapes to determine and describe similarities and differences. Make inferences from given information and frame an hypothesis to test further

Block A Term 3

Place Value

- Count in multiples of 7 (and relate to \times and \div tables)
- Count in multiples of 25
- Round any number to the nearest 10, 100, 1000
- Identify, represent and estimate numbers using different representations
- Recognise the place value in a four digit number (thousands, hundreds, tens and ones)
- Order and compare numbers beyond 1000

Addition and Subtraction

- Add and subtract numbers with up to 4 digits using the efficient written methods of columnar addition and subtraction where appropriate ($4d+4d$, $4d-4d$ using carrying with addition, moving to using with subtraction)
- Estimate and use inverse operations to check answers to a calculation
- Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why

Measurement

- Convert between different units of measure using capacity
- Estimate, compare and calculate different capacities

- Read, write and convert time between analogue and digital 12 and 24 hour clocks
- Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days

Statistics

- Interpret and present discrete data using bar charts and continuous data using line graphs
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs

Block B Term 3

Place Value

- Count in multiples of 7 (and relate to \times and \div tables)
- Count in multiples of 25
- Count backwards through zero to include negative numbers
- Solve number and practical problems with increasingly large numbers (0-9999)

Multiplication and Division

- Recall multiplication and division facts up to 12×12 (2, 5, 10, 3, 4, 8, 6, 9, 7)
- Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers
- Recognise and use factor pairs and commutatively in mental calculations
- Multiply two digit and three digit numbers by a one digit number using formal written layout. (grid, moving to expanded short multiplication)
- Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Fractions

- Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by 10 (Use negative numbers and numbers >1000)
- Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non unit fractions where the answer is a whole number.
- Identify, name and write equivalent fractions of a given fraction, including tenths and hundredths
- Add and subtract fractions with the same denominator

Geometry

- Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes

- Identify acute and obtuse angles and compare and order angles up to two right angles by size
- Identify lines of symmetry in 2D shapes presented in different orientations.
- Complete a simple symmetric figure with respect to a specific line of symmetry

Block C Term 3

Place Value

- Count in multiples of 6 and 9 (and relate to \times and \div tables)
- Count in multiples of 1000 from any number
- Find 1000 more or less than a given number
- Round any number to the nearest 10, 100, 1000

Addition and Subtraction

- Add and subtract numbers with up to 4 digits using the efficient written methods of columnar addition and subtraction where appropriate ($4d+4d$, $4d-4d$ using carrying with addition, moving to using with subtraction)
- Estimate and use inverse operations to check answers to a calculation
- Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why

Measurement

- Convert between different units of measure **Revision- use length, weight and capacity in problems**
- Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m
- Find the area of rectilinear shapes by counting
- Estimate, compare and calculate different measures, including money in £ and p

Block D Term 3

Place Value

- Count in multiples of 7 (and relate to \times and \div tables) and 25
- Order and compare numbers beyond 1000
- Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value
- Solve number and practical problems with increasingly large numbers (0-9999)

Multiplication and Division

- Recall multiplication and division facts up to 12×12 (2, 5, 10, 3, 4, 8, 6)

- Recognise and use factor pairs and commutativity in mental calculations
- Multiply two digit and three digit numbers by a one digit number using formal written layout. (grid, moving to expanded short multiplication)
- Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Fractions

- Recognise and write decimal equivalents of any number of tenths and hundredths
- Recognise and write decimal equivalents to $\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$
- Find the effect of dividing a one or two digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths
- Round decimals with one decimal place to the nearest whole number
- Compare numbers with the same number of decimal places up to two decimal places
- Solve simple measure and money problems involving fractions and decimals to two decimal places

Geometry and Shape

- Describe positions on a 2D grid as coordinates in the first quadrant
- Describe movements between position as translations of a given unit to the left/right and up/down
- Plot specified points and draw sides to complete a given polygon