

Medium Term Maths – Autumn 1 – Year 5

Counting

Weekly times table counting
Counting in tens, hundreds, thousands and ten thousands for rounding

Hook for learning:

Links to history and science learning challenges

Non-negotiables:

Read, write, order and compare numbers to at least 100,000 and determine the value of each digit.
Round any number up to 100,000 to the nearest 10,000, 1000, 100 or 10.
Add and subtract whole numbers with more than 4 digits using a formal column method.

Number and Place value

Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.
Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.
Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000.
Solve number problems and practical problems that involve [reading, writing, comparing and ordering numbers up to 1,000,000]
Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.

Learning Challenge links

Plot dates accurately on a timeline using 4-digit numbers.

Exceeding Expectation

Ask children to create inverse puzzles for each other, working out a starting number from a final number and a series of steps.
Compare calculations laid out correctly and incorrectly. What is the difference between the correct and incorrect answer? Why?

PIXL TCC objectives for recovery curriculum

Number and place value

Can count backwards through zero in steps that are familiar from the previous year e.g. 1, 2, 5, 10, 3. Can compare and order numbers beyond 1000. Can round any number to the nearest 10, 100 or 1000 using the context of measures. Can solve problems using place value and number facts. Can read and write numbers up to 1 000 000.

Calculation

Add and subtract whole numbers with more than 4 digits using a formal column method.
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.
Use inverse operations
Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why.

Meeting Expectations

Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.
Solve number and practical problems with numbers up to 1,000,000
Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why.

Addition and subtraction

Can use knowledge of inverse operations to check answers to addition and subtraction calculations. Can solve two-step problems involving addition and subtraction, deciding which operation to use. Can add three-digit and extend to four-digit numbers using the formal column method. Can subtract three-digit and extend to four-digit numbers using the formal column method. Can add and subtract increasingly large numbers mentally

Multiplication and division

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.
Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.
Establish whether a number up to 100 is prime and recall prime numbers up to 19.
Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).
Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Multiplication and division

Can recall and use multiplication and division facts for all the times table (learning 6, 12, 9, 11 and 7). Can multiply and divide mentally using derived facts such as $600 \div 3 = 200$ because $2 \times 3 = 6$ or the associative law. Can multiply two-digit and three-digit by one-digit numbers using short multiplication. Can begin to divide three-digit by one-digit numbers with exact answers using short division. Can solve problems involving multiplication and division

Maths –Weekly – Year 5

Week 2: Number Place Value within 100,000

Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.

Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.

Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000.

Solve number problems and practical problems that involve [reading, writing, comparing and ordering numbers up to 1,000,000]

Intervention/arithmetic practice based on TCCs for recovery curriculum

Place value PIXL TCCs q1-10

Week 3: Number Place Value within 100,000

Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000.

Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.

Intervention/arithmetic practice based on TCCs for recovery curriculum

Place value PIXL TCCs q11-19

Week 4: Addition and Subtraction

Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Intervention/arithmetic practice based on TCCs for recovery curriculum

Addition and subtraction TCCs q1-10

Week 5: Addition and Subtraction

Add and subtract numbers mentally with increasingly large numbers.

Estimate and use inverse operations to check answers to a calculation

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Intervention/arithmetic practice based on TCCs for recovery curriculum

Addition and subtraction TCCs q11-18

Week 6: Multiplication and Division

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.

Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).

Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Establish whether a number up to 100 is prime and recall prime numbers up to 19.

Intervention/arithmetic practice based on TCCs for recovery curriculum

Multiplication and division TCCs q1-10

Week 7: Multiplication and Division

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.

Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).

Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000.

Intervention/arithmetic practice based on TCCs for recovery curriculum

Multiplication and division TCCs q11-18

Week 8: Arithmetic skills

Recap of formal methods and strategies taught this half term. Catch up from assessment week.

Times table practice