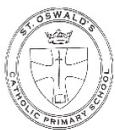


Year Group



YEAR 5 2022-2023

Objectives highlighted in yellow are 'Ready to Progress criteria' – children need to be secure on these before moving on

Autumn 1

Number – Place Value

Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.
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.
Solve number problems and practical problems that involve the above.
Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000.

Number – Addition and Subtraction

Add and subtract numbers mentally with increasingly large numbers.
Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction).
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.

Number-Multiplication and Division

Secure fluency in multiplication and division facts (5NF1)
Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. (5MD-2)
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.

Autumn 2

Number-Multiplication and Division

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

Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size (5MD-1)

Multiply and divide whole numbers by 1,000.
Multiply and divide numbers mentally, drawing upon known facts, multiples of 10, 100, 1000

Fractions

Find equivalent fractions and understand that they have the same value and the same position in the linear number system. 5F-2 including tenths and hundredths
Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number.
Compare and order fractions whose denominators are all multiples of the same number.
Add and subtract fractions with the same denominator, and denominators that are multiples of the same number.

Continuous objectives

The continuous objectives are woven into the teaching continually during the year.
Children are given continual and regular opportunities to apply their knowledge to problem solving and reasoning.

	<p>Solve number problems and practical problems that relate to all of the above (number and place value)</p> <p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p> <p>Solve problems involving number up to three decimal places</p> <p>Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</p> <p>Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</p> <p>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple ratio</p> <p>Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.</p> <p>Solve problems involving converting between units of time</p> <p>Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</p>
<p><u>Key Basic skills to be taught continuously through the year</u></p>	<p>Count forward and backwards in steps of powers of 10 for any given number up to 1 000 000</p> <p>Read and write numbers up to 1 000 000 and determine the place value of each digit</p> <p>Recognise the place value in large whole numbers to at least 1 000 000</p> <p>Compare and order numbers to at least 1 000 000</p> <p>Partition numbers into place value columns</p> <p>Partition numbers in different ways</p> <p>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</p> <p>Use rounding to support estimation and calculation</p> <p>Use knowledge of place value to derive new addition and subtraction facts</p> <p>Secure fluency in multiplication table facts, and corresponding division facts, through continued practice (SNF-1)</p> <p>Identify multiples and common factors of two or more numbers</p> <p>Find factor pairs of a two-digit number</p> <p>Understand the terms multiple, factor, and prime, square and cube numbers and use them to construct equivalent statements</p> <p>Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</p> <p>Establish whether a number up to 100 is prime and recall prime numbers up to 19</p> <p>Can find the prime factors of a given number</p> <p>Read and recognise Roman numerals up to 1000</p> <p>Recognise and use square and cube numbers</p> <p>Double any number between 1 and 1000 and find all corresponding halves</p> <p>Add and subtract mentally with increasingly large numbers to aid fluency e.g. TthTHTU \pm THTU, TthTHTU \pm HTU, HTU.t \pm HTU.t</p> <p>Multiply and divide whole numbers including those involving decimals by 10, 100 and 1000</p> <p>Use knowledge of inverse to derive associated multiplication and division facts</p> <p>Use known facts and knowledge of multiples to derive new facts</p>

Count up and down in tenths, hundredths and thousandths in decimals and fractions including bridging zero

For fractions and decimals derive pairs with complements to 1 and to other whole numbers

Identify equivalent fractions

Recognise decimal equivalents of fractions with a denominator of ten, one hundred and one thousand

Read and write decimal numbers with up to 3 decimal places as fractions

Read, write order and compare numbers with up to three decimal places

Round decimals with up to two decimal places to the nearest whole number and to one decimal place

Know percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$, and those fractions with a denominator of a multiple of 10 or 25

Use knowledge of complements to 60 and that there are 60 minutes in an hour to convert time durations