

Nelson Infant School - Mathematics Medium Term Planning - Year 2 Autumn Term

Teaching will ensure that all pupils

- **Become fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- **Can solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Number Sense	
Number: Number & Place Value	Measurement
Identify, represent and estimate numbers using different representations including number lines. Partition 2 digit numbers in different ways, including multiples of 10 and 1. Read and write numbers to at least 100 in numerals. Compare and order numbers from 0 up to 100. Use < > = signs. Use place value and number facts to solve problems. Count in steps of 2 and 5 from 0, forwards and backwards. Count in 10s from any number, forwards and backwards. Round 2 digit numbers to nearest multiple of 10. Recognise odd and even numbers to at least 100.	Tell and write the time to 5 minutes, including 1/4 past and $\frac{1}{4}$ to the hour and draw hands on a clock face. Know number of minutes in an hour. Recognise and use symbols for pounds £ and pence p. Solve simple problems in practical contexts involving addition and subtraction of money of same unit, including giving change. Choose and use appropriate standard units to estimate and measure temperature (°C) Link to Fire topic?? Choose and use appropriate standard units to estimate and measure height/length in any direction (m/cm). Compare and order height/length using < > =.

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Additive Reasoning	
Number: Number & Place Value	Number: Addition & Subtraction
<p>Identify, represent and estimate numbers using different representations including number lines.</p> <p>Partition 2 digit numbers in different ways, including multiples of 10 and 1.</p> <p>Read and write numbers to at least 100 in numerals.</p> <p>Compare and order numbers from 0 up to 100. Use $<$ $>$ $=$ signs.</p> <p>Use place value and number facts to solve problems.</p> <p>Count in steps of 2 and 5 from 0, forwards and backwards.</p> <p>Count in 10s from any number, forwards and backwards.</p> <p>Round 2 digit numbers to nearest multiple of 10.</p> <p>Recognise odd and even numbers to at least 100.</p>	<p>Understand addition as combining groups of objects and as counting on.</p> <p>Understand subtraction as 'taking away'/counting back and 'finding the difference'.</p> <p>Recall and use addition and subtraction facts to 20 fluently.</p> <p>Recall and use doubles of all numbers to at least 10 and corresponding halves.</p> <p>Add and subtract single digit numbers to and from multiples of 10.</p> <p>Add and subtract single digit numbers to and from two digit numbers without crossing 10s boundary.</p> <p>Add and subtract using concrete objects, pictorial representations and mentally.</p> <p>Solve problems with addition and subtraction using concrete objects and representations, including those involving numbers, quantities and measures.</p> <p>Use a range of mental calculation strategies including reordering numbers in a calculation, using patterns of similar calculations, rounding to 10 and compensating when $\pm 9/19$ or $11/21$ and using near doubles.</p> <p>Begin to use additional mental calculation strategies including partitioning into TU and recombining, counting on in tens and ones and partitioning numbers in different ways.</p> <p>Understand and show that addition can be done in any order and subtraction cannot.</p> <p>Solve missing number problems.</p>

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Multiplicative Reasoning	
Number: Number & Place Value	Number: Multiplication & Division
Identify, represent and estimate numbers using different representations including number lines. Partition 2 digit numbers in different ways, including multiples of 10 and 1. Read and write numbers to at least 100 in numerals. Compare and order numbers from 0 up to 100. Use < > = signs. Use place value and number facts to solve problems. Count in steps of 2 and 5 from 0, forwards and backwards. Count in 10s from any number, forwards and backwards. Round 2 digit numbers to nearest multiple of 10. Recognise odd and even numbers to at least 100.	Understand multiplication as 'repeated addition' and as an 'array'. Understand division as 'grouping' and 'sharing'. Introduce symbols x and ÷ and their actions. Calculate mathematical statements for multiplication and division using symbols x, ÷, =. Solve problems using multiplication and division using materials, arrays, repeated addition, mental methods and x and ÷ facts. Derive, recall and use x and ÷ facts for 2 and 10 times tables.

Geometric Reasoning	
Geometry: Properties of Shape	Number: Fractions
Identify and describe properties of 2d shapes including number of sides. Identify and describe properties of 3d shapes including number of edges, vertices and faces. Compare and sort common 2d and 3d shapes and everyday objects.	Recognise, find and name quarter as one of four equal parts of an object, shape or quantity. Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3.

Measurement: Recognise and use language relating to dates, including days of the week, weeks, months and years.

Each class to cover this objective during daily class routines, e.g. calendars, birthdays.

Statistics: Ask and answer simple questions by counting number of objects in each category and sorting categories by quantity.

Ask and answer questions about totalling and comparing categorical data.

Each class to cover these objectives during cross-curricular theme activities.