

Chirbury C of E VC Primary School - Long Term Maths Planning – Class One (Rec/Y1/Y2) Reception Year One Year Two

(Year groupings are notional only and children will be taught each subject area when appropriate to the individual. Some children will exceed these expectations and then be taught from another programme of study. Time allocations show the amount of time given to each topic area and approximately when they will be taught.)

****Timings are approximations only. Includes time at the beginning or end of the term for consolidation, gap filling, seasonal activities and assessments****

Term	Unit	Unit	Unit	Unit
Autumn 1	<p>Number: place value (3 weeks)</p> <p>**Baseline assessments**</p> <p>Recognise some numerals of personal significance.</p> <p>Recognises numerals 0 to 5.</p> <p>Counts up to three or four objects by saying one number name for each item.</p> <p>Counts actions or objects which cannot be moved.</p> <p>Selects the correct numeral to represent 0 to 5 objects.</p> <p>Counts an irregular arrangement of up to 5 objects.</p> <p>Count to 20, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <p>Count, read and write numbers to 20 in numerals and words.</p> <p>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.</p> <p>Given a number, identify one more or one less.</p> <p>Read and write numbers to at least 100 in numerals and words (giving numbers up to 20 and the words for the multiples of 10).</p> <p>Recognise the place value of each digit in a two digit number (tens, ones) - make and identify a two digit number up to 50 using concrete materials.</p> <p>Identify, represent and estimate numbers to 50 using different representations, including the number line.</p> <p>Compare and order numbers from 0 up to 100 - order three or more 2-digit amounts when represented using the same practical equipment.</p> <p>Count in steps of 10 forwards and backwards from any number (pay particular attention to twenty, thirty and fifty whose names do not follow the root number and ensure increased emphasis on ability to count backwards).</p>	<p>Measurement: lengths and heights (1 week)</p> <p>Children use everyday language to talk about size, length/height to compare objects and to solve problems.</p> <p>Orders two or three items by length or height.</p> <p>Measure and begin to record lengths and heights using uniform non-standard units within children's range of counting competence.</p> <p>Compare, describe and solve practical problems for: lengths and heights for example, long/short, longer/shorter, tall/short, double/half.</p> <p>Choose and use appropriate standard units to estimate and measure length/height (m/cm); to the nearest appropriate unit.</p> <p>Choose and correctly use the appropriate equipment to measure lengths and height e.g. ruler, metre ruler, tape measure, trundle wheel.</p> <p>Compare and order length – order the values of three or more lengths.</p>	<p>Number: addition and subtraction (2 weeks)</p> <p>In practical activities and discussion, begin to use the vocabulary involved in adding and subtracting.</p> <p>Uses the language of 'more' and 'fewer' to compare two sets of objects.</p> <p>Represent and use number bonds and related subtraction facts (within 10) – use concrete materials to represent addition facts for ten.</p> <p>Add and subtract one digit numbers (to 10), including zero.</p> <p>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.</p> <p>Solve simple one-step problems involving addition.</p> <p>Recall and use addition and subtraction facts to 10 fluently.</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally including: a two digit number and ones; a two digit number and tens; two two digit numbers; adding three one digit numbers.</p> <p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.</p> <p>Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.</p>	<p>Geometry: properties of shapes (1 week)</p> <p>Begin to use mathematical names for 'flat' 2-D and 'solid' 3-D shapes, and mathematical terms to describe shapes.</p> <p>Select a particular named shape.</p> <p>Recognise and name common 2-D shapes including when presented in different orientations.</p> <p>Recognise and name common 3-D shapes including when presented in different orientations.</p> <p>Identify and describe the properties of 2-D shapes, including the number of sides and corners.</p> <p>Compare and sort common 2-D shapes and everyday objects.</p> <p>Order and arrange combinations of mathematical objects in patterns and sequences.</p> <p>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.</p>

Number: place value
(1 week)

Recognises numerals 0 to 10.
Counts up to ten objects by saying one number name for each item.
Counts actions or objects which cannot be moved.
Selects the correct numeral to represent 0 to 10 objects.
Counts an irregular arrangement of up to 10 objects.
Count to 40, forwards and backwards, beginning with 0 or, from any given number (ensure increased emphasis on the ability to count backwards).
Count, read and write numbers from 0 to 40 in numerals and words (giving numbers up to 20 and the words for the multiples of 10).
Given a number, identify one more and one less.
Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.
Count in multiples of tens (pay particular attention to twenty, thirty and fifty whose names do not follow the root number).
Read and write numbers to at least 100 in numerals and words (giving the words for the multiples of 10).
Recognise the place value of each digit in a two digit number (tens, ones) - make and identify a two digit number up to 100 using concrete materials.
Identify, represent and estimate numbers to 100 using different representations including the number line.
Compare and order numbers from 0 up to 100; begin to use <, > and = signs.
Count in steps of 2, 5 and 10 from 0 forward and backward (ensure increased emphasis on ability to count backward and identify and discuss patterns on the 100 square when skip counting).
Use place value and number facts to solve problems.

Number: fractions
(2 weeks)

In practical activities and discussion, begin to use the vocabulary involved in doubling, halving and sharing.
Understand that a fraction can describe part of a whole.
Understand that a unit fraction represents one equal part of a whole.
Recognise, find and name a half as one of two equal parts of an object, shape or quantity.
Understand and use the terms numerator and denominator.
Recognise, find, name and write fractions $\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.
Write simple fractions for example, $\frac{1}{2}$ of 6 = 3.

Measurement: time
(2 weeks)

Uses everyday language related to time.
Orders and sequences familiar events.
Recognise and use language relating to dates, including days of the week, weeks, months and years.
Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].
Tell the time to the hour and draw the hands on a clock face to show these times.
Compare, describe and solve practical problems for time – [for example, compare the duration of two events using the language of quicker and slower].
Tell the time for quarter past the hour and draw hands on a clock to show the time, recognising that the hour hand will not be exactly on the hour (*NB - it will have moved one quarter of the way between the hour numbers*).
Tell the time for quarter to the hour and draw hands on a clock to show the time, recognising that the hour hand will not be exactly on the hour (*NB - it will have moved three quarters of the way between the hour numbers and therefore has one quarter of the space left to go*).
Know the number of minutes in an hour and the number of hours in a day.

Measurement: money
(1 week)

****Autumn assessments/consolidation/gap filling****
Beginning to use everyday language related to money.
Recognise 1p, 2p, 5p, 10p and 20p coins by colour, shape, size and/or numerals/words.
Exchange a 2p, 5p, 10p and 20p coin for the correct number of 1p coins.
Recognise and use symbols of pounds (£) and pence (p); combine amounts to make a particular value.
Find different combinations of coins that equal the same amounts of money.

**Number: place value
(2 weeks)**

Recognises numerals 0 to 20.
Counts up to 20 objects by saying one number name for each item.
Counts actions or objects which cannot be moved.
Selects the correct numeral to represent 0 to 20 objects.
Counts an irregular arrangement of up to 20 objects.
Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
Count, read and write numbers from 0-100 in numerals and words (giving numbers up to 20 and the words for the multiples of 10).
Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.
Given a number, identify one more and one less.
Count in multiples of twos and fives.
Read and write numbers to at least 100 in numerals and words.
Recognise the place value of each digit in a two digit number (tens, ones) - say what each digit represents in a two digit number.
Identify, represent and estimate numbers to 100 using different representations including the number line.
Compare and order numbers from 0 up to 100; use <, > and = signs.
Count in twos, fives and tens from any number, forward and backwards.
Count in steps of 3 from 0, forward and backwards.
Use place value and number facts to solve problems.

**Measurement: mass/weight
(1 week)**

Children use everyday language to talk about mass/weight to compare quantities and objects and to solve problems.
Orders two or three items by mass/weight.
Measure and begin to record mass/weight using uniform non-standard units within children's range of counting competence.
Compare, describe and solve practical problems for mass/weight: [for example, heavy/light, heavier than, lighter than].
Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit using scales.
Compare and order two or more masses/weights.

**Geometry: properties of shapes
(1 week)**

Begin to use mathematical names for 'flat' 2-D and 'solid' 3-D shapes, and mathematical terms to describe shapes.
Select a particular named shape.
Use familiar objects and common shapes to create and recreate patterns and build models.
Identify and name common 2-D shapes from within a wider selection that includes a full range of shapes e.g. find squares within a selection of quadrilaterals.
Identify and name common 3-D shapes from within a wider selection that includes a full range of shapes e.g. find all the cuboids within a selection of 3-D shapes.
Creates and continues patterns with 2-D and 3-D shapes.
Identify and describe the properties of 2-D shapes.
Identify a vertical line of symmetry in a shape.
Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.
Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.]

**Number: multiplication
and division
(2 weeks)**

Spring assessments/consolidation/gap filling
In practical activities and discussion, begin to use the vocabulary involved in doubling, halving and sharing.
Recall and use doubles of all numbers to 5 and corresponding halves.
Count in multiples of twos and tens.
Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.
Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.
Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (\div) and equals(=) sign.
Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.
Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

Geometry: position and direction
(1 week)

Can describe their relative position such as 'behind' or 'next to'.

Describe turning movements for whole and half turns.

Describe turning movements using left and right.

Describe direction using terms forwards/backwards/up/down.

Describe position using terms on top of, in front of, above, below, between, around, inside and outside.

Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns.

Order and arrange combinations of mathematical objects in patterns and sequences.

Number: addition and subtraction
(2 weeks)

In practical activities and discussion, begin to use the vocabulary involved in adding and subtracting.

Understand addition as combining two or more groups to make a larger group.

Understand subtraction as take away.

Begin to record number stories using number sentences.

Represent and use number bonds and related subtraction facts (within 20).

Add and subtract one digit and two digit numbers to 20, including zero.

Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.

Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.

Recall and use addition and subtraction facts to 20.

Add and subtract numbers using concrete objects, pictorial representations, and mentally including: a two digit number and ones; a two digit number and tens; two two digit numbers; adding three one digit numbers.

Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.

Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Measurement: capacity and volume
(1 week)

Children use everyday language to talk about capacity/volume to compare quantities and objects and to solve problems.

Orders two or three items by capacity/volume.

Measure and begin to record capacity and volume using uniform non-standard units and then manageable standard units (litres/millilitres) within children's counting competence.

Compare, describe and solve practical problems for capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].

Choose and use appropriate standard units to estimate and measure capacity (litres/ml) and temperature ($^{\circ}\text{C}$) to the nearest appropriate unit using thermometers and measuring vessels.

Know common points of reference for volume/capacity such as large bottle of fizzy drink is 2 litres, medicine spoon is 5ml etc. Use common points of reference to help with estimation.

Compare and order volume/capacity and record the results using $>$, $<$ and $=$.

Measurement: fractions and time
(2 weeks)

Uses everyday language related to time. Orders and sequences familiar events. Measures short periods of time in simple ways.

In practical activities and discussion, begin to use the vocabulary involved in doubling, halving and sharing.

Understand that halving is sharing into two equal portions and that this is dividing by 2.

Tell the time to the half hour recognising that the hour hand will not be exactly on the hour (*NB – it will be exactly half way between the hour numbers*).

Tell the time to the hour and half hour and draw the hands on a clock face to show these times.

Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later].

Recognise, find and name a half as one of two equal parts of an object, shape or quantity.

Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Recognise, find, name and write fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.

Write simple fractions for example, $\frac{1}{2}$ of 6 = 3. Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.

Count in fives clockwise starting at 12 (for zero) to 6 (for thirty) progressing to counting in times, e.g. 5 minutes past, 10 minutes past, 15 minutes past (quarter past), 20 minutes past etc.

Begin to tell and write the time to five minute intervals.

Know the number of minutes in an hour and the number of hours in a day.

Compare and sequence intervals of time - put units of time (second, minute, hour, day, week, month, year) in order from shortest to longest and vice versa.

**Number: place value
(1 week)**

Recognises numerals 0 to 20.
 Counts up to 20 objects by saying one number name for each item.
 Count actions or objects which cannot be moved.
 Selects the correct numeral to represent 0 to 20 objects.
 Counts an irregular arrangement of up to 20 objects.
 Finds one more or one less from a group of up to 20 objects.
 Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
 Count, read and write numbers from 0 - 100 in numerals and words (giving numbers up to 20 and the words for the multiples of 10).
 Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.
 Given a number, identify one more and one less.
 Identify, represent and estimate numbers to 100 using different representations including the number line.
 Recognise the place value of each digit in a two digit number (tens, ones) - say what each digit represents in a two digit number.
 Read and write numbers to at least 100 in numerals and words.
 Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward.
 Use place value and number facts to solve problems.
 Use the <, > and = signs when comparing one and two-digit numbers (pay particular attention to numbers that have the same digits e.g. 34 and 43).

**Measurement: money
(2 weeks)**

Use everyday language related to money.
 Begin to recognise different denominations of coins.
 Recognise and know the value of different denominations of coins and notes.
 Recognise 1p, 2p, 5p, 10p and 20p coins by colour, shape, size and/or numerals/words.
 Exchange a 2p, 5p, 10p and 20p coin for the correct number of 1p coins.
 Recognise and know the value of 50p, £1 and £2 coins by colour, shape, size and/or numerals/words.
 Recognise and know the value of £5, £10 and £20 notes.
 Recognise and use symbols of pounds (£) and pence (p); combine amounts to make a particular value.
 Find different combinations of coins that equal the same amounts of money.
 Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

**Number: addition and subtraction
(2 weeks)**

In practical activities and discussion, begin to use the vocabulary involved in adding and subtracting.
 Finds the total number of items in two groups by counting all of them.
 Says the number that is one more than a given number.
 Finds one more or one less from a group of up to 10 objects.
 Begins to recognise some number bonds to 10.
 Represent and use number bonds and related subtraction facts within 20.
 Add and subtract one digit and two digit numbers to 50, including zero.
 Add and subtract numbers using concrete objects, pictorial representations, and mentally including: a two digit number and ones; a two digit number and tens; two two digit numbers; adding three one digit numbers.
 Read, write and interpret mathematical statements involving addition (+) subtraction (-) and equals (=) signs.
 Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems.
 Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.
 Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.
 Add and subtract numbers using concrete objects, pictorial representations, and mentally including: a two digit number and ones; a two digit number and tens; two two digit numbers; adding three one digit numbers.
 Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
 Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.

**Measurement: lengths and height/mass/weight
(2 weeks)**

Children use everyday language to talk about mass/weight, length/height to compare quantities and objects and to solve problems.
 Orders two items by weight or length/height.
 Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than]; lengths/heights [for example long/short].
 Measure and begin to record mass/weight, lengths/heights with manageable standard units (cm/m) and (kg/g) within children's range of counting competence.
 Choose and use appropriate standard units to estimate and measure mass (kg/g) and lengths/heights (cm/m) to the nearest appropriate unit using scales and rulers.
 Solve practical problems for length/height and mass/weight.
 Use common points of reference they know to help with estimation e.g. height of a ruler is 30cm.
 Compare and order mass and lengths/heights and record the results using >, < and =.

**Measurement: time
(1 week)**

Uses everyday language related to time.
Orders and sequences familiar events.
Measures short periods of time in simple ways.

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

Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].

Tell the time to the hour and half hour and draw the hands on a clock face to show these times.

Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later].

Measure and begin to record time (hours, minutes, seconds).

Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.

Know the number of minutes in an hour and the number of hours in a day.

Compare and sequence intervals of time - to enable comparison between different units of time, use appropriate calculation strategies to convert between units, e.g.

half an hour in minutes is $\frac{1}{2}$ of 60 minutes which is 30 minutes; the number of hours in 2 days is double 24 which is 48 hours.

Solve simple problems in a practical context involving time.

**Number: multiplication and division
(2 weeks)**

In practical activities and discussion, begin to use the vocabulary involved in doubling, halving and sharing.

Begin to understand that doubling is adding the same number to itself and that it is multiplying by 2

Begin to understand that halving is sharing into two equal portions and that this is dividing by 2.
Count in multiples of twos, fives and tens.

Recall and use doubles of all numbers to 10 and corresponding halves.

Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.

Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.

Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (\div) and equals(=) sign.

Understand division as sharing and grouping and that a division calculation can have a remainder.

**Statistics: sorting and sequencing
(1 week)**

Summer assessments/consolidation/gap filling

Summer assessments/consolidation/gap filling

Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.
Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.

Ask and answer questions about totalling and comparing categorical data.

**Geometry: position and direction/
2-D and 3-D shape
(1 week)**

Can describe their relative position such as 'behind' or 'next to'.

Begin to use mathematical names for 'flat' 2-D and 'solid' 3-D shapes, and mathematical terms to describe shapes.

Select a particular named shape.

Use familiar objects and common shapes to create and recreate patterns and build models.

Describe turning movements for quarter and three-quarter turns including using left and right.

Describe direction using forwards/backwards/up/down/sideways/left/right.

Describe position using terms before, after and the ordinal numbers.

Recognise and name common 2-D and 3-D shapes, including rectangles, squares, circles and triangles, cuboids (including cubes) pyramids and spheres – including in different orientations.

Creates and continues patterns with 2-D and 3-D shapes.

Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns.

Understand and use the language clockwise and anti-clockwise.

Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.

Order and arrange combinations of mathematical objects in patterns and sequences.

Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.

Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.]