# Gainford CE Primary and Preschool
## Maths Learning Plan **Term 1**
## **Year 2**

| *Topic or Activity* | *Year 2 Term 1 Knowledge Based Learning Objectives* |
|---|---|
| **Number: Place Value** | Read and write numbers to at least 100 in numerals and in words |
| | Recognise the place value of each digit in a two-digit number (tens, ones) |
| | Identify, represent and estimate numbers using different representations, including the number line |
| | Compare and order numbers from 0 up to 100; use <, > and = signs |
| | Use place value and number facts to solve problems |
| | Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward |
| | |
| **Number: Addition & Subtraction** | Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 |
| | 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 |
| | Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot |
| | 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 |
| | Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems |
| | |
| **Measurement: Money** | Recognise and use symbols for 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: Multiplication &**      Division | Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers [*count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward* ] |
|---|---|

| | Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs |
|---|---|
| | Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts |
| | Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot |

# Overview

## Small Steps

- Count objects to 100 and read and write numbers in numerals and words
- Represent numbers to 100
- Tens and ones with a part-whole model
- Tens and ones using addition
- Use a place value chart
- Compare objects
- Compare numbers
- Order objects and numbers
- Count in 2s, 5s and 10s
- Count in 3s

## NC Objectives

Read and write numbers to at least 100 in numerals and in words.

Recognise the place value of each digit in a two digit number (tens, ones).

Identify, represent and estimate numbers using different representations including the number line.

Compare and order numbers from 0 up to 100; use <, > and = signs.

Use place value and number facts to solve problems.

Count in steps of 2, 3 and 5 from 0, and in tens from any number, forwards and backwards.

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# Overview
## Small Steps

Fact families – addition and subtraction bonds to 20

Check calculations

Compare number sentences

Related facts

Bonds to 100 (tens)

Add and subtract 1s

10 more and 10 less

Add and subtract 10s

Add a 2-digit and 1-digit number – crossing ten

Subtract a 1-digit number from a 2-digit number – crossing ten

Add two 2-digit numbers – not crossing ten – add ones and add tens

Add two 2-digit numbers – crossing ten – add ones and add tens

Subtract a 2-digit number from a 2-digit number – not crossing ten

Subtract a 2-digit number from a 2-digit number – crossing ten – subtract ones and tens

Bonds to 100 (tens and ones)

Add three 1-digit numbers

## NC Objectives

Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.

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.

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

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.

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

# Overview
## Small Steps

- Count money – pence
- Count money – pounds (notes and coins)
- Count money – notes and coins
- Select money
- Make the same amount
- Compare money
- Find the total
- Find the difference
- Find change
- Two-step problems

## NC Objectives

Recognise and use symbols for 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.

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# Overview
## Small Steps

- Recognise equal groups
- Make equal groups
- Add equal groups
- Multiplication sentences using the × symbol
- Multiplication sentences from pictures
- Use arrays
- 2 times-table
- 5 times-table
- 10 times-table

## NC Objectives

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 (×), division (÷) 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.

# Maths Learning Plan **Term 2**
# **Year 2**

| *Topic or Activity* | *Year 2 Term 2 Knowledge Based Learning Objectives* |
|---|---|
| **Number:** Multiplication & **Division** | Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers |
| | Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs |
| | Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts |
| | Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot |
| | |
| **Statistics** | 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: Properties of Shape** | Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line |
| | 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] |
| | Compare and sort common 2-D and 3-D shapes and everyday objects |
| | |
| **Number: Fractions** | Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity |
| | Write simple fractions e.g. ½ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and ½ |
| | |
| **Measurement: Length & Height** | Choose and use appropriate standard units to estimate and measure **length/height** in any direction (m/cm); **mass** (kg/g); **temperature** (°C); **capacity** (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels |
| | Compare and order lengths, mass, volume/capacity and record the results using >, < and = |

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# Overview
## Small Steps

- Make tally charts
- Draw pictograms (1-1 )
- Interpret pictograms (1-1)
- Draw pictograms (2, 5 and 10)
- Interpret pictograms (2, 5 and 10)
- Block diagrams

## NC Objectives

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.

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# Overview
## Small Steps

Recognise 2-D and 3-D shapes

Count sides on 2-D shapes

Count vertices on 2-D shapes

Draw 2-D shapes

Lines of symmetry

Sort 2-D shapes

Make patterns with 2-D shapes

Count faces on 3-D shapes

Count edges on 3-D shapes

Count vertices on 3-D shapes

Sort 3-D shapes

Make patterns with 3-D shapes

## NC Objectives

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

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.]

Compare and sort common 2-D and 3-D shapes and everyday objects.

# Overview
## Small Steps

## NC Objectives

Make equal parts

Recognise a half

Find a half

Recognise a quarter

Find a quarter

Recognise a third

Find a third

Unit fractions

Non-unit fractions

Equivalence of $\frac{1}{2}$ and $\frac{2}{4}$

Find three quarters

Count in fractions

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 $6 = 3$ and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$

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## Overview
### Small Steps

- Measure length (cm)
- Measure length (m)
- Compare lengths
- Order lengths
- Four operations with lengths

## NC Objectives

Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.

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

# Maths Learning Plan **Term 3**
## **Year 2**

| *Topic or Activity* | *Year 2 Term 3 Knowledge Based Learning Objectives* |
|---|---|
| **Geometry: Position & Direction** | 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 [clockwise and anti-clockwise] |
| | Order and arrange combinations of mathematical objects in patterns and sequences |
| | |
| **Measurement: Time** | 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. |
| | Know the number of minutes in an hour and the number of hours in a day. |
| | |
| **Measurement: Mass, Capacity & Temperature** | Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); **mass** (kg/g); **temperature** (°C); **capacity** (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels |
| | Compare and order lengths, mass, volume/capacity and record the results using >, < and = |

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# Overview
## Small Steps

- Describing movement
- Describing turns
- Describing movement and turns
- Making patterns with shapes

## NC Objectives

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 (clockwise and anti-clockwise).

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

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## Overview
### Small Steps

### NC Objectives

O'clock and half past

Quarter past and quarter to

Telling time to 5 minutes

Hours and days

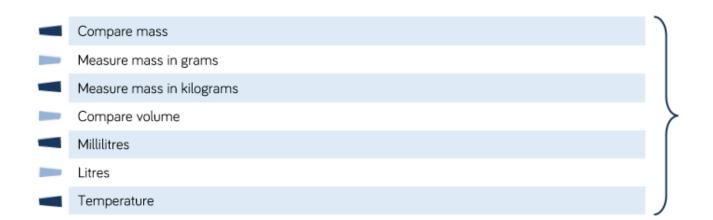Find durations of time

Compare durations of time

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.

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# Overview
## Small Steps

- Compare mass
- Measure mass in grams
- Measure mass in kilograms
- Compare volume
- Millilitres
- Litres
- Temperature

## NC Objectives

Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels

Compare and order lengths, mass, volume/capacity and record the results using >, < and =