Green Lane Church of England Primary School
Maths Learning Plan __Term 1__
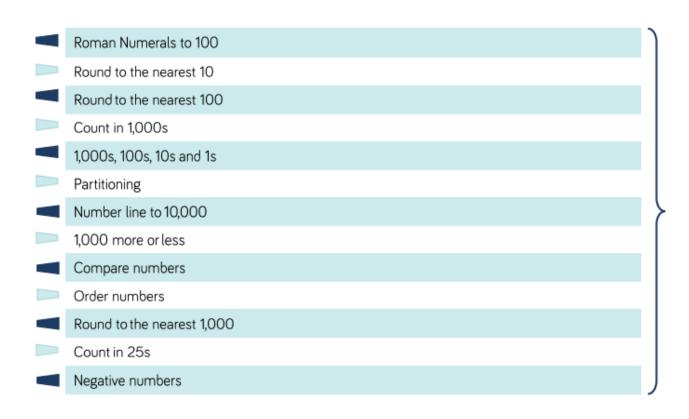## __Year 4__

Topic or Activity	*Year 4 Term 1 Knowledge Based Learning Objectives*
Number: Place Value	Count in multiples of 6, 7, 9, 25 and 1000
	Find 1000 more or less than a given number
	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
	Order and compare numbers beyond 1000
	Identify, represent and estimate numbers using different representations
	Round any number to the nearest 10, 100 or 1 000
	Solve number and practical problems that involve all of the above and with increasingly large positive numbers
	Count backwards through zero to include negative numbers
Number: Addition & Subtraction	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
	Estimate and use inverse operations to check answers to a calculation
	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why
Measurement: Length & Perimeter	measure and calculate the **perimeter** of a rectilinear figure [including squares] in centimetres and metres
	convert between different units of measure [e.g. kilometre to metre; hour to minute]
Number: Multiplication & Division	recall multiplication and division facts for multiplication tables up to 12 × 12
	count in multiples of 6, 7, 9, 25 and 1 000
	use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers

White Rose Maths

Overview

Small Steps

- Roman Numerals to 100
- Round to the nearest 10
- Round to the nearest 100
- Count in 1,000s
- 1,000s, 100s, 10s and 1s
- Partitioning
- Number line to 10,000
- 1,000 more or less
- Compare numbers
- Order numbers
- Round to the nearest 1,000
- Count in 25s
- Negative numbers

NC Objectives

Count in multiples of 6, 7, 9, 25 and 1,000.

Find 1,000 more or less than a given number.

Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones).

Order and compare numbers beyond 1,000.

Identify, represent and estimate numbers using different representations.

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

Solve number and practical problems that involve all of the above and with increasingly large positive numbers.

Count backwards through zero to include negative numbers.

White Rose Maths

Overview
Small Steps

- Add and subtract 1s, 10s, 100s and 1,000s
- Add two 4-digit numbers – no exchange
- Add two 4-digit numbers – one exchange
- Add two 4-digit numbers – more than one exchange
- Subtract two 4-digit numbers – no exchange
- Subtract two 4-digit numbers – one exchange
- Subtract two 4-digit numbers – more than one exchange
- Efficient subtraction
- Estimate answers
- Checking strategies

NC Objectives

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.
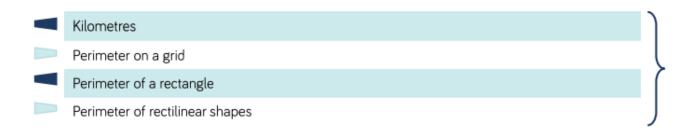
Estimate and use inverse operations to check answers to a calculation.

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

White Rose Maths

Overview
Small Steps

- Kilometres
- Perimeter on a grid
- Perimeter of a rectangle
- Perimeter of rectilinear shapes

NC Objectives

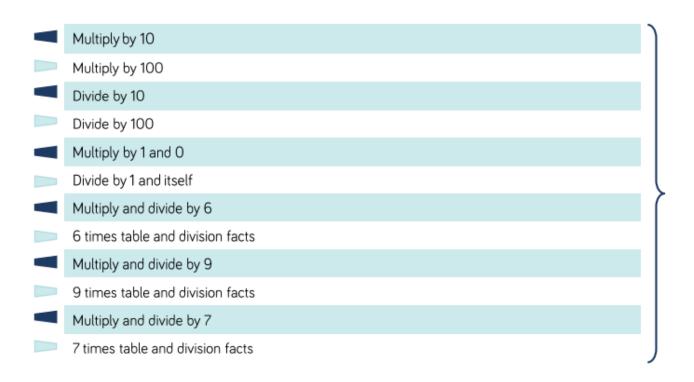Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.

Convert between different units of measure [for example, kilometre to metre].

Overview
Small Steps

- Multiply by 10
- Multiply by 100
- Divide by 10
- Divide by 100
- Multiply by 1 and 0
- Divide by 1 and itself
- Multiply and divide by 6
- 6 times table and division facts
- Multiply and divide by 9
- 9 times table and division facts
- Multiply and divide by 7
- 7 times table and division facts

NC Objectives

Recall and use multiplication and division facts for multiplication tables up to 12 × 12

Count in multiples of 6, 7, 9, 25 and 1,000

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.

Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one-digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Green Lane Church of England Primary School
Maths Learning Plan **Term 2**
Year 4

Topic or Activity	*Year 4 Term 2 Knowledge Based Learning Objectives*
Number: Multiplication & Division	Recall multiplication and division facts for multiplication tables up to 12 × 12
	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
	Recognise and use factor pairs and commutativity in mental calculations
	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout
	Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects
Measurement: Area	Find the area of rectilinear shapes by counting squares
Number: Fractions	Recognise and show, using diagrams, families of common equivalent fractions
	count up and down in hundredths
	Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten
	Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
	Add and subtract fractions with the same denominator
Number: Decimals	Recognise and write decimal equivalents of any number of tenths or hundredths
	Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
	Solve simple measure and money problems involving fractions and decimals to two decimal places

Year 4 | Spring Term | Week 1 to 3 – Number: Multiplication & Division

Overview
Small Steps

- 11 and 12 times-table
- Multiply 3 numbers
- Factor pairs
- Efficient multiplication
- Written methods
- Multiply 2-digits by 1-digit
- Multiply 3-digits by 1-digit
- Divide 2-digits by 1-digit (1)
- Divide 2-digits by 1-digit (2)
- Divide 3-digits by 1-digit
- Correspondence problems

NC Objectives

Recall and use multiplication and division facts for multiplication tables up to 12 × 12.

Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.

Recognise and use factor pairs and commutativity in mental calculations.

Multiply two-digit and three-digit numbers by a one digit number using formal written layout.

Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one-digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.
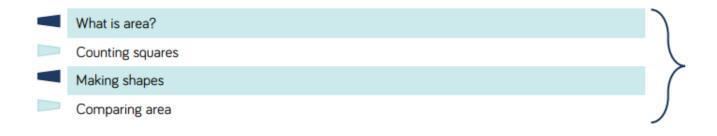
Overview
Small Steps

NC Objectives

What is area?

Counting squares

Making shapes

Comparing area

Find the area of rectilinear shapes by counting squares.

White Rose Maths

Overview
Small Steps

What is a fraction?
Equivalent fractions (1)
Equivalent fractions (2)
Fractions greater than 1
Count in fractions
Add 2 or more fractions
Subtract 2 fractions
Subtract from whole amounts
Calculate fractions of a quantity
Problem solving – calculate quantities

NC Objectives

Recognise and show, using diagrams, families of common equivalent fractions.

Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.
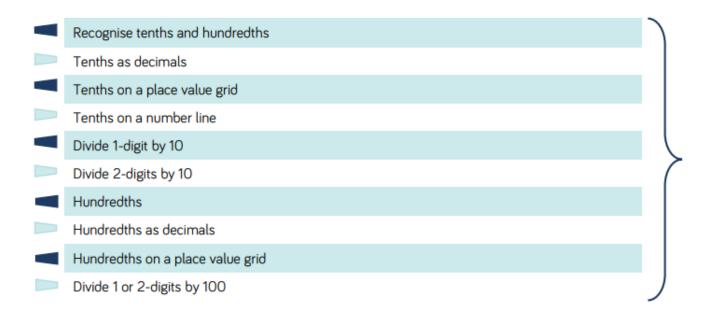
Add and subtract fractions with the same denominator.

Overview
Small Steps

- Recognise tenths and hundredths
- Tenths as decimals
- Tenths on a place value grid
- Tenths on a number line
- Divide 1-digit by 10
- Divide 2-digits by 10
- Hundredths
- Hundredths as decimals
- Hundredths on a place value grid
- Divide 1 or 2-digits by 100

NC Objectives

Recognise and write decimal equivalents of any number of tenths or hundredths.

Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths

Solve simple measure and money **problems involving fractions and decimals to two decimal places.**

Convert between different units of measure [for example, kilometre to metre]

Green Lane Church of England Primary School
Maths Learning Plan **Term 3**
Year 4

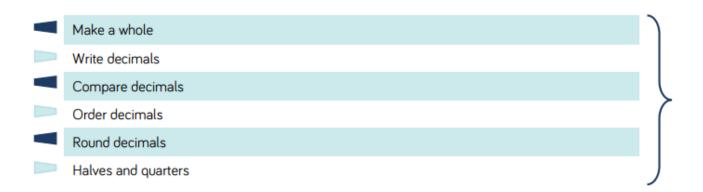| *Topic or Activity*	*Year 4 Term 3 Knowledge Based Learning Objectives*
Number: Decimals	Compare numbers with the same number of decimal places up to two decimal places
	Round decimals with one decimal place to the nearest whole number
	Recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$
	Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
Measurement: Money	Estimate, compare and calculate different measures, including money in pounds and pence
	Solve simple measure and money problems involving fractions and decimals to two decimal places
Measurement: Time	Read, write and convert time between analogue and digital 12 and 24-hour clocks
	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days
Statistics	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
Geometry: Properties of Shape	Identify acute and obtuse angles and compare and order angles up to two right angles by size
	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
	Identify lines of symmetry in 2-D shapes presented in different orientations
	Complete a simple symmetric figure with respect to a specific line of symmetry
	Describe positions on a 2-D grid as coordinates in the first quadrant

Geometry: Position & Direction	Plot specified points and draw sides to complete a given polygon
	Describe movements between positions as translations of a given unit to the left/right and up/down

Overview
Small Steps

Make a whole

Write decimals

Compare decimals

Order decimals

Round decimals

Halves and quarters

NC Objectives

Compare numbers with the same number of decimal places up to two decimal places.

Round decimals with one decimal place to the nearest whole number.

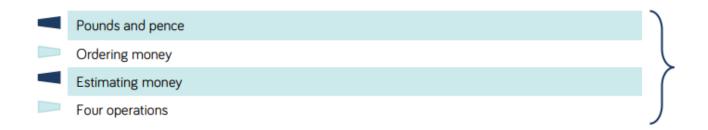Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$

Understand the effect of dividing a one or two digit number by 10 or 100. Identifying the value of the digits in the answer as ones, tenths and hundredths.

Overview
Small Steps

Pounds and pence

Ordering money

Estimating money
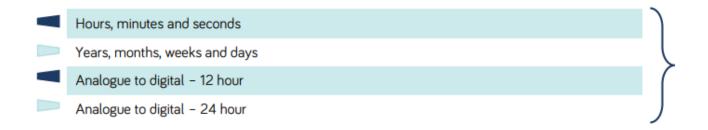
Four operations

NC Objectives

Estimate, compare and calculate different measures, including money in pounds and pence.

Solve simple measure and money problems involving fractions and decimals to two decimal places.

Overview
Small Steps

- Hours, minutes and seconds
- Years, months, weeks and days
- Analogue to digital – 12 hour
- Analogue to digital – 24 hour

NC Objectives

Read, write and convert time between analogue and digital 12- and 24-hour clocks.

Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

Overview

Small Steps

NC Objectives

Interpret charts

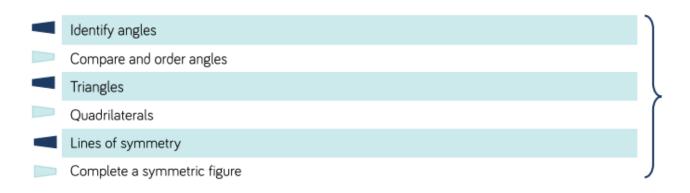Comparison, sum & difference

Introducing line graphs

Line graphs

Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.

Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

White Rose Maths

Overview

Small Steps

- Identify angles
- Compare and order angles
- Triangles
- Quadrilaterals
- Lines of symmetry
- Complete a symmetric figure

NC Objectives

Identify acute and obtuse angles and compare and order angles up to two right angles by size.

Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.

Identify lines of symmetry in 2-D shapes presented in different orientations.
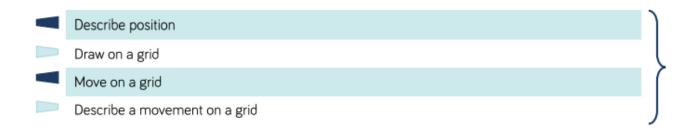
Complete a simple symmetric figure with respect to a specific line of symmetry.

White Rose Maths

Overview
Small Steps

- Describe position
- Draw on a grid
- Move on a grid
- Describe a movement on a grid

NC Objectives

Describe positions on a 2-D grid as coordinates in the first quadrant. Plot specified points and draw sides to complete a given polygon.

Describe movements between positions as translations of a given unit to the left/ right and up/ down.