

Pen-y-ghent Planning Overview 2022-23

	Mathematics Curriculum – Year 3 Autumn		
Unit:	Number: Place Value	Number: Addition and Subtraction	Number – multiplication and division
Term:	Autumn 1: 3 Weeks	Autumn 1: 5 Weeks	Autumn 2: 4 Weeks
What We Will Learn	Children will build on their understanding of tens and link this to 100. They will have the opportunity to explore 100 explicitly. They will do this through using a variety of concrete equipment to help understand the relationship. Pupils will practice counting in 100's. They will use a base of ten to help them become familiar with any number up to 1,000.	Pupils will have the opportunity to add numbers greater than 100 they will apply their prior knowledge of adding and subtracting ones and tens to adding and subtracting multiples of 100. Children will have access to a range of manipulative and pictorial representations throughout so that the pupils can see and understand the value of the digits.	Pupils will focus on finding equal groups, They will recap on 2,5 and 10 times table and explore the 3, 4 and 8 times tables. Pupils will link their counting with real life experiences. They will use arrays and number tracks to help them explore and calculate multiplications statements.
What We Will Do	Identify, represent and estimate numbers using different representations. Find 10 or 100 more or less than a given number; recognise the place value of each digit in a three digit number (hundreds, tens and ones). Compare and order numbers up to 1000 Read and write numbers up to 1000 in numerals and in words. Solve number problems and practical problems involving these ideas. Count from 0 in multiples of 50 and 100	Add and subtract numbers mentally, including: a three digit number and ones; a three-digit number and tens; a three digit number and hundreds. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. Estimate the answer to a calculation and use inverse operations to check answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), 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 context. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.
Skills Learned	Pupils will further develop their knowledge in number and place value they will recognise the value of a digit based on its location within a number and learn that a 3 digit number is made up of 100's, 10's and 1's.	Pupils will begin to develop their knowledge with addition and subtraction and understand the relationship between numbers and how quantities relate to one another.	Pupils will build on prior knowledge and will learn to identify the difference between columns and rows. They will gain fluency and know basic definitions for multiplication.

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Mathematics Curriculum – Year 3 Spring					
Unit:	Number – multiplication and division	Measurements Money	statistics	Length and perimeter	Fractions
Term:	Spring 1: 3 Weeks	Spring 1:1 Week	Spring 1: 2 Weeks	Spring 2: 3 Weeks	Spring 2: 2 Weeks
What We Will Learn	Pupils will further explore times table becoming secure in 2, 4, and 8. They will explore the relationship between these three times tables. Pupils will use their knowledge of multiplication and division facts to compare statements using inequality symbols. They will be using partitioning to represent and solve 2 digits by 1 digit calculations.	Pupils will have the opportunity to explore a range of coins and notes they will count in 1p, 2p, 5p and 10p coins. They will transfer their knowledge of the 2X table to count in 20p coins. They will recap on the value of coins and notes and understand that they can be represented in different ways but still have the same value.	Pupils will build on prior knowledge learned in year 1. They will be exposed to a range of graphs and will be able to interpret data and construct a graph in the form of a tally. They will be able to convert their data into a pictogram and bar chart using. Pupils will be able to identify symbols and say what it represents and the value.	Pupils will develop their learning in measurement. They are introduced to millimetres for the first time and build on their understanding of centimetres and metres. Pupils will use different measuring equipment including rulers, tape measures, metre sticks and trundle wheels. They discuss which equipment is the most appropriate depending on the object they are measuring. They will explore a simple 2D perimeter and discuss its properties.	Pupils will explore fractions and build on prior learning, links should be made here to dividing by $\frac{2}{3}$ / $\frac{4}{4}$. Pupils will have the opportunity to practice the concept of sharing to find a half/quarter and thirds they will use a range of objects e.g.: Paper plates, hoops and containers can be used to share objects into $\frac{2}{3}$ / $\frac{3}{4}$ equal groups.
What We Will Do	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objectives. Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	Add and subtract amounts of money to give change, using both £ and p in practical contexts.	Interpret and present data using bar charts, pictograms and tables. Solve one step and two-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in scaled bar charts and pictograms and tables	Measure, compare, add and subtract: lengths (m/cm/mm). Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Measure the perimeter of simple 2D shapes. Continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed and simple equivalents of mixed units	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Count up and down in tenths. Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
Skills Learned	Pupils will further develop their fluency and know basic definitions for multiplication.	Pupils will further develop and gain fluency in written techniques for all of the four operations within this unit.	Pupils will further develop the understanding of patterns and relationships, including sorting and categorising, representation of a key/symbol and its value.	Pupils will build on prior knowledge of measuring in standard unit mm and they will become familiar with a range of measuring devices. They be able to recall their knowledge of shape and identify properties of 2D shapes.	Pupils will further develop their knowledge of number by using the mathematical language of numerator, denominator and what these represent. Pupils will extend and recall their knowledge of the whole and halves to quarters, thirds of shapes, objects and quantities.

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Mathematics Curriculum – Year 3 Summer				
Unit:	Number - Fractions	Time	Properties of shape	Mass and capacity
Term:	Summer 1: 3 Weeks	Summer 1: 3 Weeks	Summer 2: 2 Weeks	Summer 2: 3 Weeks
What We Will Learn	Pupils will explore fractions and will recap on the language numerator and denominator. Pupils will practice partitioning using a bar-model/frame they will explore decimals in relation to fractions. Pupils will explore equivalent fractions in pairs and can start to spot patterns.	Pupils will have the opportunity to explore time. They will use their knowledge of addition and subtraction, and understand that there are 60 minutes in an hour, they will be able to compare the length of time taken by particular events or tasks. Practice finding start/end times by moving hands on a clock. For example, If playtime starts at five past ten and lasts for 20 minutes, what time will playtime end	Pupils will develop their knowledge around shape and angles, they will have the opportunity to practice and explore right angles and that it is a quarter turn, 2 right angles make a half-turn, 3 right angles make three-quarters of a turn and 4 right angles make a complete turn. Pupils will see examples in different orientations so that they understand that a right angle does not have to be made up of a horizontal and vertical line.	Pupils will recap on Year 1 learning by comparing the mass of different objects. They will initially use balance scales to compare the mass of two or more objects. They will transfer their knowledge of greater than/smaller than and compare mass using < and > and order objects based on their masses.
What We Will Do	Recognise and show, using diagrams, equivalent fractions with small denominators. Add and subtract fractions with the same denominator within one whole. Compare and order unit fractions, and fractions with the same denominators. Solve problems that involve all of the above	Tell and write the time from an analogue clock, including using Roman numerals and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes and hours. Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events (for example to calculate the time taken by particular events or tasks).	Recognise angles as a property of shape or a description of a turn. Identify right angles, recognise that two right angles make a half-term, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Draw 2-D shapes and make 3-D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed units (for example, 1kg and 200g) and simple equivalents of mixed units (for example, 5m = 500cm)
Skills Learned	Pupils will further develop their understanding of equal parts and non-equal parts and relate this to a shape or object.	Pupils will further develop their understanding of time they will understand the durations of time using both analogue and digital clocks.	Pupils will further develop their mathematical vocabulary and fluency they will be able to identify properties including types of angles, lines, symmetry and lengths of sides to describe the shape.	Pupils will use a range of skills to be able to transfer over their knowledge to add and subtract volumes and capacities. They will apply their understanding of different methods such as column addition/subtraction, finding the difference.