Intent

At Bude Primary Infants we have adopted a Mastery Curriculum for Maths with a scheme called White Rose. We adapt this scheme to cater for our children's needs and add our own stimulating activities.

Maths Mastery is founded on 3 main principles:

- **Fluency** - learning number facts with quick recall and using these elsewhere in maths.
- **Reasoning** in maths is the process of applying logical thinking to a situation to derive the correct problem-solving strategy for a given question, and using this method to develop and describe a solution.
- **Problem solving** - is finding a way to apply knowledge and skills you have to answer unfamiliar types of problems.
  Mastery aims to teach all children how to succeed at learning new skills in small manageable steps which they build on progressively through the week and revisit during the year. Maths Mastery gives children a deeper understanding of number, shapes, space and measure. It teaches children how to represent numbers in lots of different ways, using drawings, written methods and a wide selection of apparatus. It gives children a better knowledge of what a number means and helps children to build knowledge and skills that they will be able to apply in more complex problems as they get more confident.

EYFS

In EYFS, children are taught how to count using one to one correspondence e.g. that one object is one number. They learn to count in order and know how numbers compare to one another by quantity. We learn what each number to 10, then 20 means - and how to represent them in different ways using a range of equipment. We also learn about shapes, positions and measures through practical play experiences.

Key stage 1

Broadly the children will learn the following in each year group:

- Year 1 - children will explore numbers to 100, identifying and representing those using objects and pictorial representations. Children will look at basic fractions, shapes and measurements, applying their new knowledge to the world around them.
- Year 2 - children will use place value and number facts to solve problems using addition and subtraction, recall and use multiplication and division facts, recognise a variety of fractions and shapes and use measurement.

In the first three tables below you will see a broad overview of when we teach each area of the maths curriculum across the year. This will always be adjusted and changed in accordance with the needs of cohorts, groups and individuals.

You will then find our progression of skills for all areas of the maths curriculum for EYFS Year 1 and Year 2

EYFS	Year 1	Year 2
Matching Sorting Comparing Patterns Representing, matching sorting comparing numbers 1,23 Shapes Representing, sorting and composition of numbers 4 and 5	Place value – within 10 Addition and Subtraction – within 10 Geometry – shape Place Value within 20	Place Value Addition and Subtraction Measurement – money Multiplication and division

EYFS	Year 1	Year 2
One less Composition of numbers to 5 Comparing numbers to 5 Equal and Unequal groups Addition Subtraction Heavier/ Lighter Full/Empty Composition and matching of numbers 6,7,8 One more and one less Addition Height Length Time Days of the week	Addition / Subtraction within 20 Place Value within 50 Measurement – Length and Height Measurement – weight and volume	Multiplication and Division Statistics Geometry – properties of shape Fractions

	Representing, sorting and composition of 9 and 10 Ordering numerals to 10 Counting backwards from 10 Making 10 3D shape		

Subject – Maths – Summer

	EYFS	Year 1	Year 2
	Number patterns to 20 Matching numerals to pictures Estimating Subtracting Missing numbers Ordering numerals to 20 Shape Capacity Adding/Subtraction Doubling Sharing Grouping Odd and Even Problem solving Patterns Directions	Multiplication and Division Fractions Geometry – position and direction Place value – within 100 Measurement – money Measurement – time	Measurement - Length and Height Geometry – Position and Direction Measurement – Time Measurement – Mass, Capacity and Temperature

	Progression Map		
	EYFS	Year 1	Year 2
Number and Place Value			
Counting	Subitise (recognise quantities without counting) up to 5. Verbally count beyond 20, recognising the pattern of the counting system.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count in multiples of twos, fives and tens	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward
Place Value	Have a deep understanding of number to 10, including the composition of each number	Read and write numbers to 100 in numerals Read and write numbers from 1 to 20 in numerals and words Begin to recognise the place value of numbers beyond 20 (tens and ones) Identify and represent numbers using objects and pictorial representations including the number line	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) Partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13) Identify, represent and estimate numbers using different representations, including the number line
Comparing and Ordering numbers	Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity	Use the language of: equal to, more than, less than (fewer), most, least Given a number, identify one more and one less	Compare and order numbers from 0 up to 100; use and = signs Find 1 or 10 more or less than a given number
Rounding and estimation			Round numbers to at least 100 to the nearest 10
Multiplying by powers of 10			Understand the connection between the 10 multiplication table and place value
Sequences and Patterns	Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.	Recognise and create repeating patterns with numbers, objects and shapes Identify odd and even numbers linked to counting in twos from 0 and 1	Describe and extend simple sequences involving counting on or back in different steps
Solving number problems		Solve problems and practical problems involving all of the above	Use place value and number facts to solve problems
Addition and Subtraction			
Understanding addition and subtraction	Explore the composition of numbers to 10.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting)

			Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot Understand subtraction as take away and difference (how many more, how many less/fewer)
Addition and subtraction facts	Compare quantities up to 10 in different context Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Represent and use number bonds and related subtraction facts within 20	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes)
Mental methods	Automatically recall number bonds for numbers 0–5 and some to 10.	Add and subtract onedigit and two-digit numbers to 20, including zero (using concrete objects and pictorial representations)	Select a mental strategy appropriate for the numbers involved in the calculation 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
Estimating and checking calculations			Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
Solving addition and subtraction problems including those with missing numbers		Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = - 9	Solve problems with addition and subtraction including those with missing numbers: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods
Multiplication and Division			
Understanding multiplication and division			Understand multiplication as repeated addition Understand division as sharing and grouping and that a division calculation can have a remainder Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
Multiplication and division facts		Recall and use doubles of all numbers to 10 and corresponding halves	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Derive and use doubles of simple two-digit numbers (numbers in which the ones total less

			than 10) Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)
Mental methods			Calculate mathematical statements for multiplication (using repeated addition) and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
Solving multiplication and division problems including those with missing numbers		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	Solve problems involving multiplication and division (including those with remainders), using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts
Fractions			
Understanding fractions		Understand that a fraction can describe part of a whole Understand that a unit fraction represents one equal part of a whole	Understand and use the terms numerator and denominator Understand that a fraction can describe part of a set Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be
Fractions of objects, shapes and quantities		Recognise, find and name a half as one of two equal parts of an object, shape or quantity (including measure) Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (including measure	Recognise, 1/3 ¼ 2/4 ¾ find, name and write fractions and of a length, shape, set of objects or quantity
Counting, comparing and ordering fractions		Count on and back in steps of ½ and1/4	Count on and back in steps of ½ 1/3 and ¼ Compare and order unit fractions and fractions with the same denominators (including on a number line)
Equivalence		Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 6/12 for eg	Recognise and show, using diagrams, equivalent fractions with small denominators
Measurement (length/height, perimeter, area and mass/weight)			
Length / height	Compare length, weight and capacity	Measure and begin to record lengths and heights, using non-standard and then manageable standard units (m and cm) within children's range of counting competence Compare and describe lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit using rulers Compare and order lengths and record the results using >, < and =

Mass			Measure and begin to record mass/weight, using nonstandard and then standard units (kg and g) within children's range of counting competence	Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit using scales
Measurement (capacity, volume, temperature and conversion)				
Capacity / volume	Compare length, weight and capacity		Measure and begin to record capacity and volume using non-standard and then standard units (litres and ml) within children's range of counting competence Compare and describe 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 and volume (litres/ml) to the nearest appropriate unit using measuring vessels Compare and order volume/capacity and record the results using >, < and
Temperature				Choose and use appropriate standard units to estimate and measure temperature to the nearest degree (°C) using thermometers
Measurement (time)				
Time			Recognise and use language relating to dates, including days of the week, weeks, months and years Compare and describe time (for example, quicker, slower, earlier, later) Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening Measure and begin to record time (hours, minutes, seconds) Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	Compare and sequence intervals of time Know the number of minutes in an hour and the number of hours in a day 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
Measurement (money and solving problems)				
Money			Recognise and know the value of different denominations of coins and notes	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 Add and subtract money of the same unit, including giving change
Solving problems involving money and			Solve practical problems for: - lengths and heights - mass/weight - capacity and volume - time	Solve simple problems in a practical context involving addition and subtraction of money and measures (including time)
Geometry - properties of shapes				

Properties of shape	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	Recognise and name common 2- D shapes, including rectangles (including squares), circles and triangles Recognise and name common 3- D shapes, including cuboids (including cubes), pyramids and spheres	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
Angles and rotation		Describe movement, including whole, half, quarter and three-quarter turns	Use mathematical vocabulary to describe movement, including rotation as a turn Understand the link between rotation and turns in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)
Patterns	Continue, copy and create repeating patterns.	Recognise and create repeating patterns with objects and shapes	Order and arrange combinations of mathematical objects in patterns and sequenc
Position and direction	Select, rotate and manipulate shapes in order to develop spatial reasoning skills.	Describe position and direction	Use mathematical vocabulary to describe position, movement, including movement in a straight line
Statistics			
Sorting and classifying		Sort objects, numbers and shapes to a given criterion and their own	Compare and sort objects, numbers and common 2-D and 3- D shapes and everyday objects
Present and interpret data		Present and interpret data in block diagrams using practical equipment	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables
Solve problems using data		Ask and answer simple questions by counting the number of objects in each category Ask and answer questions by comparing categorical data	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