



CASTLETOWN PRIMARY SCHOOL



Numeracy - Year 3

Children will work towards achieving the following learning outcomes.

NUMBER: NUMBER & PLACE VALUE			
Counting	Comparing Numbers	Reading	Understanding Place Value
1. Count from 0 in multiples of 4 (KPI) 2. Count from 0 in multiples of 8 (KPI) 3. Count from 0 in multiples of 50 (KPI) 4. Count from 0 in multiples of 100 (KPI) 5. Find 10 more than a given number (KPI) 6. Find 100 more than a given number (KPI) 7. Find 10 less than a given number (KPI) 8. Find 100 less than a given number (KPI)	9. Compare and order numbers up to 1000	11. Read numbers up to 1000 in numerals. 12. Read numbers up to 1000 in words. 13. Read Roman numerals to 12 (I to XII)	16. Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) (KPI)
	Identifying, representing & estimating	Writing	Problem Solving
	10. Identify, represent and estimate numbers using different representations.	14. Write numbers up to 1000 in numerals. 15. Write numbers up to 1000 in words.	17. Solve number problems and practical problems involving Y3 number criteria.

NUMBER: ADDITION & SUBTRACTION			
Number Bonds & Rapid Recall Skills	Mental calculation	Written calculation	Problem Solving
1. Derive and recall sums and differences of multiples of 10. 2. Derive and recall pairs of two-digit numbers with a total of 100. 3. Derive and recall addition doubles for multiples of 10 to 100.	4. Add near doubles. 5. Add numbers mentally (three-digit number and ones) KPI 6. Add numbers mentally (three-digit number and tens) KPI 7. Add numbers mentally (three-digit number and hundreds) KPI 8. Subtract numbers mentally (three-digit number and ones) KPI 9. Subtract numbers mentally (three-digit number and tens) KPI 10. Subtract numbers mentally (three-digit number and hundreds) KPI	12. Add numbers with two digits, using formal written methods of column addition (without crossing boundaries) 13. Add numbers with two digits, using formal written methods of column addition (crossing boundaries) 14. Add numbers with up to three digits, using formal written methods of column addition (without crossing boundaries). 15. Add numbers with up to three digits, using formal written methods of column addition (without crossing boundaries). 16. Subtract numbers with two digits, using formal written methods of column subtraction (without crossing boundaries) 17. Subtract numbers with two digits, using formal written methods of column subtraction (crossing boundaries) 18. Subtract numbers with up to three digits, using formal written methods of column subtraction (without crossing boundaries) 19. Subtract numbers with up to three digits, using formal written methods of column subtraction (crossing boundaries)	20. Solve addition and subtraction problems. 21. Add and subtract amounts of money to give change, using both £ and p in practical contexts (KPI)
	Inverse operations, estimating and checking answers		
	11. Estimate the answer to a calculation and use inverse operations to check answers.		

NUMBER: MULTIPLICATION & DIVISION		NUMBER: FRACTIONS	
Multiplication & Division Facts	Inverse operations, estimating & checking	Counting in Fractional Steps	Add / Sub of fractions
1. Recall and use multiplication and division facts for the 3 multiplication tables. (KPI) 2. Recall and use multiplication and division facts for the 4 multiplication tables. (KPI) 3. Recall and use multiplication and division facts for the 8 multiplication tables. (KPI)	11. Estimate the answer to multiplication and division calculations and use inverse operations to check answers with Y3 content.	1. Count up and down in tenths. (KPI)	7. Add fractions with the same denominator within one whole. 8. Subtract fractions with the same denominator within one whole.
		Recognising fractions	
		2. Recognise, find and write fractions of a discrete set of objects. (KPI) 3. Recognise and use fractions as numbers.	
Rapid recall and mental calculation	Written Calculation	Comparing fractions	
4. Write and calculate mathematical statements for multiplication and division, using the multiplication tables they know (KPI) 5. Write and calculate mathematical statements for multiplication including two-digit numbers times one-digit numbers using mental strategies (KPI) 6. Derive and recall doubles of all multiples of 10 to 100 and corresponding halves. 7. Double any multiple of 5 to 100. 8. Halve any multiple of 10 to 200. 9. Multiply whole numbers by 10. 10. Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 (KPI)	12. Multiply two digit numbers by a one digit number using informal layout grid method. 13. Multiply two digit numbers by a one digit number progressing to formal layout.	4. Compare and order unit fractions. 5. Compare and order fractions with the same denominators.	
	Problem Solving	Equivalence	Problem Solving
	14. Solve problems involving multiplication and division.	6. Recognise and show, using diagrams, equivalent fractions with small denominators. (KPI)	9. Solve problems that involve the Y3 fraction criteria.

MEASUREMENT			
Comparing & Estimating	Measuring & Calculating	Telling the Time	Converting
1. Compare durations of events. 2. Estimate and read time with increasing accuracy to the nearest minute. 3. Compare time in terms of seconds, minutes, hours and o'clock. 4. Estimate, compare different measure, including money in pounds and pence.	5. Measure, compare, add and subtract: lengths (M/cm/mm) KPI 6. Measure, compare, add and subtract: mass (kg/g) KPI 7. Measure, compare, add and subtract: volume / capacity (l/ml) KPI 8. Measure the perimeter of simple 2D shapes.	9. Tell and write the time from an analogue clock (KPI) 10. Tell the time from an analogue clock using Roman numerals from I to XII (KPI) 11. Tell and write the time from 12 hour and 24 hour clocks (KPI) 12. Estimate and read time with increasing accuracy to the nearest minute. 13. Record and compare time in terms of seconds, minutes, hours and o'clock. 14. Use vocabulary such as am / pm, morning, afternoon, noon and midnight.	15. Know the number of seconds in a minute. 16. Know the number of days in each month. 17. Know the number of days in a year and leap year.

GEOMETRY: PROPERTIES OF SHAPE	GEOMETRY: POSITION & DIRECTION	STATISTICS
Identifying their shapes and properties.	Position, direction and movement	Interpreting, constructing & representing data.
<ol style="list-style-type: none"> 1. Recognise 3D shapes in different orientations. 2. Recognise 3D shapes in different orientations and describe them. 		<ol style="list-style-type: none"> 1. Interpret data using bar charts (KPI)
Drawing and Constructing		<ol style="list-style-type: none"> 2. Present data using bar charts (KPI)
<ol style="list-style-type: none"> 3. Draw 2D shapes 4. Make 3D shapes using models. 		<ol style="list-style-type: none"> 3. Interpret data using pictograms (KPI)
Angles		<ol style="list-style-type: none"> 4. Present data using pictograms (KPI)
<ol style="list-style-type: none"> 5. Recognise angles as a property of shape or a description of a turn. 6. Identify right angles (KPI) 7. Identify whether angles are greater than or less than a right angle (KPI) 8. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. 		<ol style="list-style-type: none"> 5. Interpret data using tables (KPI)
		<ol style="list-style-type: none"> 6. Present data using tables (KPI)

trial and improvement		working systematically	pattern spotting	visualising	working backwards	conjecturing	generalising and proving	reasoning: step 1: describing, step 2: explaining, step 3: convincing, step 4: justifying step 5: proving
Stage	Year Group	Problem Solving			Communicating		Reasoning	
Stage 3	Y2 into Y3	<ul style="list-style-type: none"> • use classroom discussion as support to break into a problem and make connections to previous work <ul style="list-style-type: none"> - put the problem into their own words - use mathematical content from previous year groups and their own year group to solve problems and investigate • work systematically from the beginning • choose concrete and visual equipment appropriate to the task • pattern spot in results and use patterns to then find other possibilities 			<ul style="list-style-type: none"> • organise and represent work using pictorial and abstract representations <ul style="list-style-type: none"> - working systematically • independently check results <ul style="list-style-type: none"> - look for repeats, errors and ways to improve - make reference to recording system used • use and interpret diagrams (pictorial representations) and mathematical symbols (abstract) • discuss mathematical work and begin to explain thinking <i>(REASONING STEP 1 & STEP 2)</i> <ul style="list-style-type: none"> - use appropriate mathematical vocabulary - talk about their findings by referring to their work • reflect on others' explanations/methods/strategies and use this to improve their own 		<ul style="list-style-type: none"> • provide a convinced argument for methods/solutions <i>(REASONING STEP 3)</i> <ul style="list-style-type: none"> - confident that their chain of reasoning is right and may use words such as: 'I reckon' or 'without doubt' - the underlying mathematical argument may or may not be accurate - the argument is likely to have more coherence and completeness than the explaining stage • respond to 'What if?' questions • when they have solved a problem, pose a similar problem for a partner • with support understand a general statement by finding particular examples that match it <ul style="list-style-type: none"> - with assistance of probing questions and prompts 	