

EYFS

Mathematical Vocabulary

Three and Four-Year-Olds	Communication and Language	• Use a wider range of vocabulary. • Understand 'why' questions, like: "why do you think the caterpillar is so fat?"
Reception	Communication and Language	• Learn new vocabulary. • Use new vocabulary throughout the day.
ELG	Communication and Language	Speaking • Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.

Number and Place Value

Counting

Three and Four-Year-Olds	Mathematics	• Recite numbers past 5. • Say one number name for each item in order: 1, 2, 3, 4, 5. • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').
Reception	Mathematics	• Count objects, actions and sounds. • Count beyond ten.
ELG	Mathematics	Numerical Patterns • Verbally count beyond 20, recognising the pattern of the counting system.

Identifying, Representing and Estimating Number

Three and Four-Year-Olds	Mathematics		• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Show 'finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.
Reception	Mathematics		• Subitise. • Link the number symbol (numeral) with its cardinal number value.
ELG	Mathematics	Number	• Subitise (recognising quantities without counting) up to 5.
Reading and Writing Numbers			
Three and Four-Year-Olds	Mathematics		• Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.
Reception	Mathematics		• Link the number symbol (numeral) with its cardinal number value.
Compare and Order Numbers			
Three and Four-Year-Olds	Mathematics		• Compare quantities using language: 'more than', 'fewer than'.
Reception	Mathematics		• Compare numbers.
ELG	Mathematics	Numerical 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.
Understanding Place Value			
Reception	Mathematics		• Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10.
ELG	Mathematics	Number	• Have a deep understanding of numbers to 10, including the composition of each number.

Solve Problems			
Three and Four-Year-Olds	Mathematics		• Solve real world mathematical problems with numbers up to 5.
Addition and Subtraction			
Mental Calculations			
Reception	Mathematics		• Automatically recall number bonds for numbers 0-5 and some to 10.
ELG	Mathematics	Number	• 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.
Solve Problems			
ELG	Mathematics	Numerical Patterns	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.
Measurement			
Describe, Measure, Compare and Solve (All Strands)			
Three and Four-Year-Olds	Mathematics		• Make comparisons between objects relating to size, length, weight and capacity.
Reception	Mathematics		• Compare length, weight and capacity.
Telling the Time			
Three and Four-Year-Olds	Mathematics		• Begin to describe a sequence of events, real or fictional, using words, such as ‘first’, ‘then...’
Properties of Shapes			
Recognise 2D and 3D Shapes and their Properties			

Three and Four-Year-Olds	Mathematics	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'. • Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc. • Combine shapes to make new ones – an arch, a bigger triangle, etc.
Reception	Mathematics	• Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
Compare and Classify Shapes		
Reception	Mathematics	• Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.
Position and Direction		
Position, Direction and Movement		
Three and Four-Year-Olds	Mathematics	• Understand position through words alone – for example, “The bag is under the table,” – with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like ‘in front of’ and ‘behind’.
Reception	Understanding the World	• Draw information from a simple map.
Patterns		
Three and Four-Year-Olds	Mathematics	• Talk about and identify the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’, etc. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern.

Reception	Mathematics	• Continue, copy and create repeating patterns.
Statistics		
Record, Present and Interpret Data		
Three and Four-Year-Olds	Mathematics	• Experiment with their own symbols and marks, as well as numerals.

National Curriculum		Year 1	Year 2
Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Place Value: Counting	- Count to and across 100, forwards and backwards, beginning with 0 or 1, from any given number. - Count numbers to 100 in numerals, 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
Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens			
Given a number, identify one more and one less	Place Value: Represent	- Identify and represent numbers using objects and pictorial representations. - Read and write numbers to 100 in numerals - Read and write numbers from 1 to 20 in numerals and in words.	- Read and write numbers to at least 100 in numerals and in words. - Identify, represent and estimate numbers using different representations including the number line.
Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer),most, least	Place Value: Use PV and Compare	Given a number, identify one more and one less	- Recognise the place value of each digit in a two-digit number (tens, ones) - Compare and order numbers from 0 up to 100; use > < and = signs
Read and write numbers from 1 to 20 in numerals and words.			
Count in steps of 2,3, and 5 from 0, and in tens from any number, forward and backward	Place Value: Problems and Rounding		Use Place value and number facts to solve problems
Read and write numbers to at least 100 in numerals and in words.			
Identify, represent and estimate numbers using different			

representations including the number line. Recognise the place value of each digit in a two-digit number (tens, ones) Compare and order numbers from 0 up to 100; use > < and = signs Use Place value and number facts to solve problems			
Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs Represent and use number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including zero Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = _ - 9$. Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100	Addition & Subtraction: Recall, Represent, Use Addition and Subtraction: Calculations Addition and Subtraction: Solve Problems	- Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs. - Represent and use number bonds and related subtraction facts within 20 - Add and subtract one digit and two digit numbers to 20 including zero - Solve one step problems that involve addition and subtraction using concrete objects and pictorial representations and missing number problems such as $7 = \square - 9$	- Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100 - Show that addition of two numbers can be done in any order (Commutative) and subtraction of one number from another cannot. - Recognise and use the inverse relationship between addition and subtraction and use theis to check calculations and solve missing number problems. - 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 - Solve problems with addition and subtraction; -Using concrete objects and pictorial representations including those involving numbers quantities and measures -applying their increasing knowledge of metal and written methods

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Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity 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. Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ Write simple fractions eg. $\frac{1}{2}$ of 6 = 3	Fractions: Compare Fractions: Calculations	Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	- Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ - Write simple fractions eg. $\frac{1}{2}$ of 6 = 3
Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	Algebra	Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
Compare, describe and solve practical problems for: -lengths and heights (eg. long/short, longer/shorter/tall/short, double/half) -Mass/weight (eg. heavy/light, heavier than/lighter than) -Capacity and volume (eg. full/empty, more than, less than, half, half full,	Measurement: Using Measures	- Compare, describe and solve practical problems for: -lengths and heights (eg. long/short, longer/shorter/tall/short, double/half) -Mass/weight (eg. heavy/light, heavier than/lighter than)	- Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm), mass (kg/g), temperature $^{\circ}$, 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 =

quarter) -time (eg. quicker, slower, earlier, later) Measure and begin to record the following: -lengths and heights Mass/weight Capacity and volume Time (hours, minutes, seconds) Recognise and know the different denominations of coins and notes Sequence events in chronological order using language (eg. before and after, next, first, today, yesterday, tomorrow, morning, afternoon, evening) Recognise and use language relating to dates including days of the week, weeks, months and years. Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	Measurement: Money	-Capacity and volume (eg. full/empty, more than, less than, half, half full, quarter) -time (eg. quicker, slower, earlier, later) • Measure and begin to record the following: -lengths and heights Mass/weight Capacity and volume Time (hours, minutes, seconds) • Recognise and know the 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 • Solve simple problems in a practical context involving addition and subtraction of money of the same unit including giving change
	Measurement: Time	• Sequence events in chronological order using language (eg. before and after, next, first, today, yesterday, tomorrow, morning, afternoon, evening) • Recognise and use language relating to dates including days of the week, weeks, months and years. • 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. • Tell and write the time to five minutes including quarter past/to the hour and draw the hands on the clock face to show these times. • Know the number of minutes in an hour and the number of hours in the day.

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, half and three quarter turns (clockwise and turns (clockwise and anticlockwise)			
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.	Statistics:: Present and Interpret Statistics: Solve Problems	•	• 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.