John Randall Primary School maths medium term planning Y2

Autumn		***Spring***		***Summer***	
All areas of the maths curriculum will be developed using deepening learning questions based upon solo taxonomy questioning cards.					
Number and place value: counting, reading and writing 2-digit numbers, place value	To count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward. ● To recognise the place value of each digit in a two-digit number (tens, ones). ● To identify, represent and estimate numbers using different representations, including the number line. ● To compare and order numbers from 0 up to 100; use <, > and = signs. ● To read and write numbers to at least 100 in numerals and in words. ● To use place value and number facts to solve problems.	Number and place value: estimating, counting and comparing quantities	● To count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward. ● To recognise the place value of each digit in a 2-digit number (tens, ones). ● To identify, represent and estimate numbers using different representations, including the number line. ● To compare and order numbers from 0 up to 100; use <, > and = signs. ● To read and write numbers to at least 100 in numerals and in words. ● To use place value and number facts to solve problems.	Number and place value: partitioning and rearranging	● To recognise the place value of each digit in a 2-digit number (tens, ones). ● To identify, represent and estimate numbers using different representations, including base 10. ● To compare and order numbers from 0 up to 100; use <, > and = signs. ● To read and write numbers to at least 100 in numerals and in words. ● To use place value and number facts to solve problems.

Addition and subtraction: concrete, visual and number facts	To solve problems with addition and subtraction: ● Using concrete objects and pictorial representations, including those involving numbers, quantities and measures ● Applying their increasing knowledge of mental and written methods. ● To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. ● To add and subtract 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. ● To show that addition can be done in	Addition and subtraction: using recall of addition and subtraction facts and mental calculation strategies	To solve problems with addition and subtraction: ● Using concrete objects and pictorial representations, including those involving numbers, quantities and measures ● Applying their increasing knowledge of mental and written methods. ● To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. ● To add and subtract using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a 2-digit number and tens; two 2-digit numbers; adding three one-digit numbers. ● To show that addition can be done in	Addition and subtraction: using partitioning and counting on/back strategies	● To recognise the place value of each digit in a 2-digit number (tens, ones). ● To use place value and number facts to solve problems. ● Applying their increasing knowledge of mental and written methods. . ● To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

	any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.		any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.		
Multiplication and division: repeated addition and repeated subtraction	To recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers. ● To calculate mathematical statements for multiplication and division within the multiplication tables and write them using multiplication, division and equals signs. ● To recognise and use the inverse relationship between	Addition and subtraction: using partitioning and counting on strategies	● To recognise the place value of each digit in a 2-digit number (tens, ones). ● To use place value and number facts to solve problems. ● Applying their increasing knowledge of mental and written methods. . ● To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use	Multiplication and division: a using times tables facts and inverse	To recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers. To recognise and use the inverse relationship between multiplication and division in calculations. *Pupils are introduced to the multiplication tables. They practise to*

	multiplication and division in calculations. ● To show that multiplication of two numbers can be done in any order (Commutative) and division for one number by another cannot. ● To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.		this to check calculations and missing number problems.		*become fluent in the 2, 5 and 10 multiplication tables and connect them* *to each other. They connect the 10 multiplication table to place value,* *and the 5 multiplication table to the divisions on the clock face.* *They begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations.*
Geometry - Properties of shape	To identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line. ● To identify and describe the properties	Multiplication and division: repeated addition and subtraction, arrays, grouping and using times tables facts	To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	Fractions: finding fractions of quantities, shapes and sets of objects	To recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4. ● To write simple fractions for example, 1/2 of 6 = 3 and

	of 3D shapes including the number of edges, vertices and faces. ● To identify 2D shapes on the surface of 3D shapes, for example circle on a cylinder and a triangle on a pyramid. ● To compare and sort common 2D and 3D shapes and everyday objects.		● To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. ● To recognise and use the inverse relationship between multiplication and division in calculations. ● To show that multiplication of two numbers can be done in any order (Commutative) and division for one number by another cannot. ● To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.		recognise the equivalence of two quarters and one half.

Measurement: length, mass, capacity. Money	To choose and use appropriate standard units to estimate and measure length/ height in any direction; mass; temperature; volume and capacity to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels. ● To compare and order lengths, mass, volume/capacity and record the results using >, < and =. ● To recognise and use the symbols for pounds and pence; combine amounts to make a particular value ● To find different combinations of coins that equal the same amounts of money ● To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Geometry: properties of 3D and 2D shape	To identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line. ● To identify and describe the properties of 3D shapes including the number of edges, vertices and faces. ● To identify 2D shapes on the surface of 3D shapes, for example circle on a cylinder and a triangle on a pyramid.	Measures: length, mass, capacity linked to fractions	To choose and use appropriate standard units to estimate and measure length/ height in any direction (m/cm/mm); mass (kg/g); temperature (°C); volume and capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels. ● To compare and order lengths, mass, volume/capacity and record the results using >, < and =.

Number and place value: comparing, ordering two-digit numbers and knowing their place value	To count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward. ● To recognise the place value of each digit in a two-digit number (tens, ones). ● To identify, represent and estimate numbers using different representations, including the number line. ● To compare and order numbers from 0 up to 100; use <, > and = signs. ● To read and write numbers to at least 100 in numerals and in words. ● To use place value and number facts to solve problems.	Measures: length, mass, capacity and money	To choose and use appropriate standard units to estimate and measure length/ height in any direction (m/cm/mm); mass (kg/g); temperature (°C); volume and capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels. ● To compare and order lengths, mass, volume/capacity and record the results using >, < and =.	Geometry: properties of shapes	To identify and describe the properties of 2D and 3D shapes, including the number of sides, symmetry in a vertical line, edges, vertices, and faces. ● To identify 2D shapes on the surface of 3D shapes, for example circle on a cylinder and a triangle on a pyramid. ● To compare and sort common 2D and 3D shapes and everyday objects. ● To solve one-step problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.
Addition and subtraction: using recall of addition and subtraction facts and	To solve problems with addition and subtraction: ● Using concrete objects and pictorial	Fractions: finding fractions of quantities, shapes and sets of objects	To recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4.	Measurement: money	To find different combinations of coins to equal the same amounts of money

mental calculation strategies	representations, including those involving numbers, quantities and measures ● Applying their increasing knowledge of mental and written methods. ● To add and subtract 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. ● To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.		● To write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of two quarters and one half.		● To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Multiplication and division: repeated addition and subtraction, arrays, grouping and using times tables facts	To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. ● To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. ● To recognise and use the inverse relationship between multiplication and division in calculations. ● To show that multiplication of two numbers can be done in any order (Commutative) and division for one number by another cannot. ● To solve one-step problems involving multiplication and	Multiplication and division: repeated addition and subtraction, arrays, grouping and using times tables facts	To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. ● To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. ● To recognise and use the inverse relationship between multiplication and division in calculations. ● To show that multiplication of two numbers can be done in any order (Commutative) and division for one number by another cannot. ● To solve one-step problems involving multiplication and	Measurement: time	● To 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. Know the number of minutes in an hour and the number of hours in a day.

	division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.		division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.		
Fractions: finding fractions of quantities, shapes and sets of objects	To recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4. ● To write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of two quarters and one half.	Statistics: solving problems that involve collecting data in tallies, tables and pictograms	● To interpret and construct simple pictograms, tally charts, block diagrams and simple tables. ● To ask and answer simple questions by counting the number of object in each category and sorting the categories by quantity. ● To ask and answer questions about totalling and compare categorical data.	Statistics: solving problems that involve collecting data in tallies, tables and pictograms	● To interpret and construct simple pictograms, tally charts, block diagrams and simple tables. ● To ask and answer simple questions by counting the number of object in each category and sorting the categories by quantity. ● To ask and answer questions about totalling and compare categorical data.
Geometry: position, direction, motion	● To order and arrange combinations of mathematical objects in patterns. ● To use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and	Geometry: position and direction Measures: time	To use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anti-	Geometry: position and direction	To use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anti-

	in terms of right angles for quarter, half and three quarter turns (clockwise and anti-clockwise) and movement in a straight line.		clockwise) and movement in a straight line. ● To 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.		clockwise) and movement in a straight line.
Measurement: time	To compare and sequence intervals of time. ● To 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.	Addition and subtraction: using mental calculation strategies	To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. ● To add and subtract using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a 2-digit number and tens; two 2-digit numbers; adding three one-digit numbers. To show that addition can be done in any order (commutative) and subtraction cannot. ● To recognise and use the inverse	Calculation: all four operations	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems 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.

			relationship between addition and subtraction and use this to check calculations and missing number problems.		