Tavistock Maths Planning Overview for Year 2 Adapted from Hampshire Maths Team documents		
Autumn 1	Spring 1	Summer 1
Number and Place Value Continue to practice and extend counting skills – practice counting forwards and backwards in one's, count forwards and backwards in steps of 2 and 5 using a class number line for support. Write numbers to at least 100 in numerals and words. Partition numbers into tens and units in different ways. Knowing significance of tens number. Continue to consolidate known number facts. Recognise and use number facts to 20 and halving and doubling facts in simple problems and explain working out. Add/subtract 1 or 10 to any 2-digit number and explain which digit changes and why. Explain using the 100 square. Consolidate secure understanding of "=" as equivalence. Begin to apply knowledge of place value and number facts to solving problems **Addition and Subtraction** Add 2 or 3 sets of numbers together and begin to use an unstructured numberline. Solve problems with addition and subtraction Use practical resources (counting apparatus/Diennes) to model addition/subtraction with 2-digit numbers. Add and subtract 2-digit numbers using an unstructured numberline to support thinking. Use a number line to support mental strategies for addition – jumping in steps of ten and one.	**Number and place value** Read and write numbers to at least 100 with digits consistently placed correctly. Use and apply confidently known and quickly recalled number facts and knowledge of place value to problem solving and investigations Odd and even numbers within 100. Count in multiples of 3. Continue to use and apply knowledge of writing numbers in numerals and words (to at least 100) Routinely practise and check estimation skills Use place value to compare and order numbers to 100, using <, > and = symbols. Know zero as a place holder. Recall and use addition and subtraction number facts to 20. Use number facts to 10 and begin to use to 20 to add and subtract multiples within 100. **Addition and subtraction** Use mental and written methods to add/subtract a 2-digit number and a multiple of 10 and 2 2 digit numbers. Demonstrate knowledge of which way subtraction and addition can/cannot be done. Practise addition and subtraction skills in a range of contexts, problems and investigations.	**Number and Place Value** Practise counting in 2's,3's, 5's and 10's forwards and backwards. Use place value and quickly recalled number facts to 20 to solve problems and apply to investigations. Identify, represent and estimate numbers using different representations, including the number line Confidently compare and order numbers to 100, using <, > = symbols correctly. Read and write numbers to 100 in numerals and words **Addition and subtraction** Solve a range of addition and subtraction problems confidently, choosing a suitable strategy based on the numbers involved (mental methods, number line jottings) Confidently apply known and quickly recalled facts to addition and subtraction calculations. Add and subtract numbers using concrete objects, pictorial representations and mental methods, including a two-digit number and ones, a two-digit number and tens, two two-digit numbers and adding three one-digit numbers. 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 to check the reasonableness of an answer and to solve missing number problems.

Use knowledge of number pairs and partitioning to bridge through tens numbers when adding/subtracting. Use and apply known and quickly recalled facts to solve addition and subtraction problems. Practice recalling facts. Explore the relationship between addition and subtraction – begin to use the inverse operation as a checking strategy. Begin to use known addition and subtraction facts to 20 to generate new known facts to 100. **Multiplication and division** Continue counting in steps of 2, 5 and 10 forwards and backwards. Begin to relate counting in different steps to the 2, 5 and 10 times tables. Continue to solve problems involving grouping and sharing using practical apparatus and pictorial representations. Begin to use repeated addition/repeated subtraction and arrays to show link between multiplication and division.	Use the inverse to check reasonableness of an answer. Use inverse for missing number problems. **Money** Recognize 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 (Link to addition and subtraction) Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (Link to addition and subtraction and multiplication and division) **Multiplication and Division** Practise recalling multiplication and division facts for 2,5 and 10 times tables. Solve problems involving multiplication and division using arrays, repeated addition, number lines and mental methods. Develop use of the arrays to explore the relationship between multiplication and division. Begin to develop understanding from repeated addition model towards multiplication using the x symbol. Begin to introduce the ÷ symbol. Know that multiplication can be done in any order (commutative) but division cannot. **Geometry – Position, direction and movement** Identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid Compare and sort common 2-D and 3-D shapes and everyday objects, recognizing and describing their properties.	Solve simple 2 step problems with addition and subtraction. **Measures (including calculations and fractions)** Solve problems involving all measures in practical contexts (link to addition, subtraction, multiplication and division.) **Multiplication and Division** Use known multiplication and division facts for 2, 5 and 10 times tables to solve problems. Use known multiplication facts to derive new known division facts. Solve problems involving odd and even numbers. Develop use of ÷ symbol and x to solve calculations. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

	Use mathematical vocabulary to describe position, direction and movement Investigate the concept of rotation or "turn" – in relation to angle as a movement. Continue to use and apply knowledge of quarter, half and three-quarter turns (clockwise and anti-clockwise)	
Autumn 2	Spring 2	Summer 2
Fractions Solve problems involving halves and quarters of shape and quantities Make links between unit fractions and equal sharing and grouping Understand ½ , ¼, Begin to place fractions (half, quarter) on a number line to reinforce the concept of as numbers – and that they can add up to more than one. Encourage children to use a range of visualisations and resources to support their understanding of fractions. **Measures** Compare and sequence intervals of time Tell and write the time including quarter past/to the hour and draw the hands on a clock face to show these times. Use different denomination of the coins to make a given value. Compare and order lengths and record the results using >, < and = Link to number and place value Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) **Geometry – Properties of Shape** Identify and describe the properties of a range of 2D shapes (including irregular shapes) – including number of sides and line symmetry. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Compare and sort 2D and 3D shape according to different criteria	**Measures – weight/mass** Compare and order mass and record the results using >, < and = Link to number and place value Choose and use appropriate standard units to estimate and measure mass (kg/g) **Fractions** Recognise and find half, quarter and third of a shape and set of objects or quantity. Solve problems involving fractions of shapes and quantities using practical resources and making links to division. Begin to explore the concept of equivalence – such as 2/4 is equivalent to ½. Place known fractions on a numberline. Make connections to "time" (half past, quarter past etc. Make links between fractions and measures. **Statistics** 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. Using 2's and 5's.	**Geometry (shape)** Relate quarter turns to right angles Compare and sort common 2-D and 3-D shapes and everyday objects. Solve problems involving shapes and reason about their properties. **Measures – capacity** Choose and use appropriate standard units to estimate and measure capacity (litres/ml) to the nearest appropriate unit, measuring vessels Compare and order volume/capacity and record the results using >, < and = link to numbers and place value **Fractions** Count to ten on a number line in steps of ¼ and ½. Solve problems involving known fractions, using practical resources and a range of representations. **Time- Reading clocks** 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.

Order and arrange combinations of mathematical objects in patterns and sequences		

Problem solving
Try different approaches and find ways of overcoming difficulties that arise when solving problems.
Begin to organize their work and check results
Select the mathematics they use in a wider range of classroom activities
Use mathematics as an integral part of classroom activities, e.g. engage with mathematical activities involving sorting, counting and measuring by direct comparison, begin to understand the relevance of mathematical ideas to everyday situations by using them in role play
Use heuristics (apparatus, diagrams, role play etc.) to represent and clarify a problem
Move between different representations of a problem, e.g. words, diagrams
Adopt a suggested model or systematic approach to a problem
Make connections and apply their knowledge to similar situations
Begin to apply knowledge appropriately to problem-solving

Reasoning and Dialogue
Review their work and reasoning
Understand a general statement by finding particular examples that match it
Use and interpret mathematical symbols and diagrams
Discuss their mathematical work and explain their thinking
Represent their work using objects or pictures
Begin to discuss and explain their work
Use mathematical language when discussing their work
Continue to work using symbols and simple diagrams
Draw simple conclusions from their work
Explain why an answer is correct
Predict what comes next in a simple sequence and explain why