**Pinders Primary School – Mathematics Mental Strategies – Year 2**

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| **Rapid Recall Skills**  | **Key Knowledge and Vocabulary**  |
| * Y1 and 2 facts on grid tested and recorded termly –

including associated subtraction facts* 2, 5 and 10 times table multiplication and division facts
 | Number bonds to 10 and near number bonds to add two or three single digit numbers • Know that tens frames and numicon can be used5 + 5 = 10 3 + 7 = 10  8 + 3 = 11 because 8 + 2 = 10 (one more) E.g. 7 + 2 = 9 because 7 + 3 = 10 (one less) Spot doubles and near doubles to add two or three single digit numbers * Know that a doubling is twice as many
* Know that a near double are numbers that are nearly the same as another

 1 + 1 =2 Double 1 is 2 2 + 2 = 4 Double 2 is 4* Know that 10 + 10 = 20 then this can help you work out 10 + 11.

 10 + 11 is the same as 10 + 10 + 1 which makes 21. Use number bonds to 20 and near number bonds to 20 to add 2 numbers 17 + 2 = 19 because 17 + 3 = 20 (one less) Add 10 to any 2 digit number * know how to use a hundred square
* know what happens to the numbers in each column – ten digit changes while the ones remains the same

Partitioning: Calculations with whole numbers which do not involve crossing place value boundaries- e.g. 23 + 45= ? by 40 + 5 +20 + 3 or 40 + 23 + 5 * Know that 10 ones are the same as 1 ten
* Know how to partition two digit numbers in order to partition them

Counting on or back in tens and ones to add or subtract – flexibility with number line  Adjusting - using the numbers 9 and 11 * Know how to adjust numbers by adding 10 then subtracting or adding 1

e.g. 45 – 29 becomes 45 – 30 (+1)Adjusting - ‘make ten’ * Know how to adjust numbers to make 10 e.g 6 + 7= becomes 10 + 3

 Adding and subtracting with multiples of 10 where the answer is between 0 and 100 Doubling and halving: Derives doubles and halves of multiples of 10 up to 100* Know to use number bond knowledge to make doubles up to 100

 50 + 50 = 100Doubling and halving: Find the doubles to 100 using partitioning and halves of any even number to 100* Know that grouping and sharing will support dividing by 2

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