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| **Year 1 - Building and assessing the conceptual understanding and learning – Multiplication and Division** | | | |
| **End of Year Expectations:**   * **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**    **See NCETM “Teaching for Mastery” Year 1 book – multiplication and division**  https://www.ncetm.org.uk/public/files/23305594/Mastery\_Assessment\_Y1\_Low\_Res.pdf | | **Non-statutory guidance:**  Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities.  They make connections between arrays, number patterns, and counting in twos, fives and tens. | |
| **Autumn** | **Spring** | | **Summer** |
| Children’s understanding of multiplication and division needs to build upon their security with addition and subtraction, which would therefore be the key calculation focus for the autumn term.  Children would, however, discuss and solve problems relating to grouping and sharing in practical contexts. Looking at number patterns and sequences, and counting in different steps also supports this domain. | * count in multiples of twos, fives and tens (forwards and backwards) * Explore, make, continue and describe patterns including number patterns * Solve problems involving grouping and sharing small quantities * Begin to record solutions using pictorial representations. * Begin to double quantities of objects * Begin to make connections between number patterns and counting in two’s, five’s and ten’s | | * count in multiples of twos, fives and tens (forwards and backwards) * Explore, make, continue and describe patterns including number patterns * Solve problems involving grouping and sharing small quantities * Use doubling as a strategy to solve problems. * Make connections between arrays, number patterns and counting in two’s, five’s and ten’s * Solve one step problems involving multiplication and division by calculating the answer using concrete object and pictorial representations * Begin to understand multiplication as repeated addition, using resources and visual images to support (including arrays) |

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| **Key questions:**   * Is my understanding of addition and subtraction on track? (If not, this will need to be addressed before tacking multiplication and division). | **Key questions:**   * Building upon my understanding of addition, can I solve simple multiplication problems using repeated addition. Can I draw a pictorial representation of the problem or organise resources to represent it?( My recording will be related to my recording of addition). * Can I understand and use the concept of “doubling” numbers. * Can I solve simple word problems involving division (grouping and sharing) and draw a picture or organise resources to accurately represent the problem? * Can I see how counting in two’s, five’s and tens is useful to me when I am solving problems involving repeated addition, grouping and sharing. | **Key questions:**   * Can I solve simple multiplication problems using repeated addition and the concept of scaling (three times as big, five times as long etc)? * Can I record solutions to multiplication problems using pictorial representations and resources as repeated addition? Can I relate this to jumping in repeated steps along a number line and counting in different steps? * Can I solve simple division problems using grouping or sharing (whichever is appropriate to the problem)? Can I record this by drawing an appropriate image to represent the problem? * Can I use a number line to help me solve a grouping problem, beginning to see this as repeated subtraction? * Have I explored some arrays (e.g. egg boxes) and recorded what I can see as repeated addition? Can I turn an array around and record what I see, recognising that the quantity is the same? |