


Multiplication

Year 1	Year 2	Year 3
<p><u>Mental Strategies</u> Children should experience regular counting on and back from different numbers in 1s and in multiples of 2, 5 and 10. Children should memorise and reason with numbers in 2, 5 and 10 times tables They should see ways to represent odd and even numbers. This will help them to understand the pattern in numbers.</p>  <p>Children should begin to understand multiplication as scaling in terms of double and half. (e.g. that tower of cubes is double the height of the other tower)</p> <p><u>Vocabulary</u> Ones, groups, lots of, doubling repeated addition groups of, lots of, times, columns, rows longer, bigger, higher etc times as (big, long, wide ...etc)</p> <p><u>Generalisations</u> Understand 6 counters can be arranged as 3+3 or 2+2+2</p> <p>Understand that when counting in twos, the numbers are always even.</p> <p><u>Some Key Questions</u> Why is an even number an even number? What do you notice? What's the same? What's different? Can you convince me? How do you know?</p>	<p><u>Mental Strategies</u> Children should count regularly, on and back, in steps of 2, 3, 5 and 10. Number lines should continue to be an important image to support thinking, for example</p> <p>Children should practise times table facts $2 \times 1 =$ $2 \times 2 =$ $2 \times 3 =$</p> <p>Use a clock face to support understanding of counting in 5s. Use money to support counting in 2s, 5s, 10s, 20s, 50s</p> <p><u>Vocabulary</u> multiple, multiplication array, multiplication tables / facts groups of, lots of, times, columns, rows</p> <p><u>Generalisation</u> Commutative law.</p> <p>Repeated addition can be shown mentally on a number line</p> <p>Inverse relationship between multiplication and division. Use an array to explore how numbers can be organised into groups.</p> <p><u>Some Key Questions</u> What do you notice? What's the same? What's different? Can you convince me? How do you know?</p>	<p><u>Mental Strategies</u> Children should continue to count regularly, on and back, now including multiples of 4, 8, 50, and 100, and steps of 1/10. The number line should continue to be used as an important image to support thinking, and the use of informal jottings and drawings to solve problems should be encouraged.</p> <p>Children should practise times table facts $3 \times 1 =$ $3 \times 2 =$ $3 \times 3 =$</p> <p><u>Vocabulary</u> partition grid method inverse</p> <p><u>Generalisations</u> Connecting x2, x4 and x8 through multiplication facts</p> <p>Comparing times tables with the same times tables which is ten times bigger. If $4 \times 3 = 12$, then we know $4 \times 30 = 120$. Use place value counters to demonstrate this.</p> <p>When they know multiplication facts up to x12, do they know what x13 is? (i.e. can they use 4×12 to work out 4×13 and 4×14 and beyond?)</p> <p><u>Some Key Questions</u> What do you notice? What's the same? What's different? Can you convince me? How do you know?</p>

