Lyme CP Progression in Division

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| **Year One** | **Year Two** | **Year Three** |
| Children must have secure counting skills- being able to confidently count in 2s, 5s and 10s.Children should be given opportunities to reason about what they notice in number patterns. **Group** AND **share small quantities- understanding the difference between the two concepts.****Sharing**Develops importance of one-to-one correspondence.Children should be taught to share using concrete apparatus. **Grouping**Children should apply their counting skills to develop some understanding of grouping. Use of arrays as a pictorial representation for division. 15 ÷ 3 = 5 There are 5 groups of 3.15 ÷ 5 = 3 There are 3 groups of 5.Children should be able to find ½ and ¼ and simple fractions of objects, numbers and quantities.  | **÷ = signs and missing numbers**6 ÷ 2 = = 6 ÷ 26 ÷ = 3 3 = 6 ÷  ÷ 2 = 3 3 = ÷ 2 ÷ ∇ = 3 3 = ÷ ∇Know and understand sharing and grouping- introducing children to the ÷ sign. Children should continue to use grouping and sharing for division using practical apparatus, arrays and pictorial representations. **Grouping using a numberline**Group from zero in jumps of the divisor to find our ‘how many groups of 3 are there in 15?’. 15 ÷ 3 = 5Continue work on arrays. Support children to understand how multiplication and division are inverse. Look at an array – what do you see?Counting in multiples – looking for patterns.3, 6, 9, 12, 15, 18, 21, 24 | **÷ = signs and missing numbers**Continue using a range of equations as in year 2 but with appropriate numbers.**Grouping**How many 6’s are in 30? 30 ÷ 6 can be modelled as: Becoming more efficient using a numberlineChildren need to be able to partition the dividend in different ways. 48 **÷ 4 = 12**Remainders**49 ÷ 4 = 12 r1**Sharing – 49 shared between 4. How many left over?Grouping – How many 4s make 49. How many are left over?Place value counters can be used to support children apply their knowledge of grouping. For example:60 ÷ 10 = How many groups of 10 in 60?600 ÷ 100 = How many groups of 100 in 600?  |

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| **Year Four** | **Year Five** | **Year Six** |
| **÷ = signs and missing numbers**Continue using a range of equations as in year 3 but with appropriate numbers.**Sharing, Grouping and using a number line**Children will continue to explore division as sharing and grouping, and to represent calculations on a number line until they have a secure understanding. Children should progress in their use of written division calculations: * Using tables facts with which they are fluent
* Experiencing a logical progression in the numbers they use, for example:
1. Dividend just over 10x the divisor, e.g. 84 ÷ 7
2. Dividend just over 10x the divisor when the divisor is a teen number, e.g. 173 ÷ 15
3. Dividend over 100x the divisor, e.g. 840 ÷ 7
4. Dividend over 20x the divisor, e.g. 168 ÷ 7

Children begin by writing a partial table including doubling, ten lots and 5 lots.  All of the above stages should include calculations with remainders as well as without.  | **÷ = signs and missing numbers**Continue using a range of equations but with appropriate numbers**Sharing and Grouping and using a number line**Children will continue to explore division as sharing and grouping, and to represent calculations on a number line as appropriate. Quotients should be expressed as decimals and fractions**Formal Written Methods – long and short division**E.g. 1504 ÷ 8E.g. 2364 ÷ 15 |
| **Formal Written Methods**Formal short division should only be introduced once children have a good understanding of division, its links with multiplication and the idea of ‘chunking up’ to find a target number (see use of number lines above)Short division to be modelled for understanding using place value counters as shown below. Calculations with 2 and 3-digit dividends. E.g. fig 1 | **Formal Written Methods**Continued as shown in Year 4, leading to the efficient use of a formal method. The language of grouping to be used (see link from fig. 1 in Year 4) E.g. 1435 ÷ 6Children begin to practically develop their understanding of how to express the remainder as a decimal or a fraction. Ensure practical understanding allows children to work through this  |