Mathematical Strategies - Multiplication and Division

Year level and category	Description of what to is to be achieved	Visual of what is to be achieved
End of Year 1 Mult/Div Stages 2 or 3: Counting from One	See above.	
End of Year 2 Mult/Div Stage 4: Advanced Counting	Solve multiplication problems using skip counting Solve division problems using skip counting, fair sharing, using my doubles or halves to 20	4 x 2 as 2, 4, 6, 8
End of Year 3 Mult/Div Stage 5: Early Additive Part-Whole	Solve multiplication problems using repeated addition. Link to video Can understand that turning multiplications around gives the same answer. Link to video	4 x 5 =(5 + 5) + (5 + 5) =20 10 x 3 is the same as 3 x 10
End of Year 4 Mult/Div Stage 5: Early Additive Part-Whole	Solve problems by using known multiplication facts. Link to video Link to video	x x x x x x x x = 3 x 4 =12 x x x x Malcolm has 24 pegs. He uses 2 pegs to hang out each piece of clothing. How many pieces of clothing can he hang out? 10 × 2 = 20; 2 × 2 = 4; 10 + 2 = 12

End of Year 5 Mult/Div Stage 6: Advanced Additive Early Multiplicative	I can solve multiplication and problems mentally using rounding and working forwards and backwards from that number Link to video I can solve division problems mentally by reversing multiplication problems. Link to video I can double and halve using known facts to solve larger multiplication problems. I can use these skills to solve real life problems.	**14 x 5** = 15 x 5 = 75 *so* 14 x 5 = 70 **56 ÷ 8** = 7 *because* 8 x _ = 56 8 x **7** = 56 8 x 4 = 8 x 2 doubled = 32 8 x 4 = double 8 x half 4 = 32 OR 6 x 5 = 30 12 x 5 = 60 because 12 is double 6 Seven children had 42 tables to clear. They decided to share the job equally. How many tables did each child clear?
End of Year 6 Mult/Div Stage 6: Advanced Additive Early Multiplicative	I can solve multiplication and problems mentally using rounding and working forwards and backwards from that number. Link to video. I can solve division problems mentally by reversing multiplication problems. Link to video. I can solve division problems with a remainder using my multiplication knowledge. Link to video. I can double and halve using known facts to solve larger multiplication problems. Link to video. I can use these skills to solve real life problems. Link to video.	**16 x 8** = 15 x 8 = 120 *so* 16 x 8 = 128 **56 ÷ 8** = 7 *because* 8 x _ = 56 8 x **7** = 56 **59 ÷ 8 =** 7 remainder 3 *because* 8 x 7 = 56 59 - 56 = 3 8 x 4 = 8 x 2 doubled = 32 8 x 4 = double 8 x half 4 = 32 OR 6 x 5 = 30 12 x 5 = 60 because 12 is double 6 Seven children had 51 tasks to complete. They decided to share them equally. How many jobs did each child need to?

End of Year 7 Mult/Div Strategy Stage 7: Advanced Multiplicative Early Proportional	I can use rounding and compensating to solve multiplication problems Link to video I can partition using place value to solve multiplication problems Link to video I understand factors and products, and equations Link to video I can use round and compensating to solve division problems Link to video I can round and find remainders Link to video	39 x 6 = (40 x 6) - (1x6) = 240 - 6 = 234 24 x 6 = (20 x 6) + (4 x 6) = 120 + 24 = 144 81 ÷ 27 = So 81 ÷ 9 = 9 81 ÷ (9 ÷ 3) = (9 x 3) 81 ÷ 3 = 27 196 ÷ 4 50 x 4 = 200 So 196 ÷ 4 = 50 - 1 = 49 103 ÷ 10 100 ÷ 10 = 10 So 103 ÷ 10 = 10 r 3
End of Year 8 Mult/Div Strategy Stage 7: Advanced Multiplicative Early Proportional		
Mult/Div Strategy stage 8: Advanced proportional	I can convert decimals to fractions and vice versa I can multiply fractions. Link to video I can divide fractions. Link to video I can use doubles and halves with place value to solve decimal problems. Link to video	3.6 x 0.75 = 0.75 = ¾ So ¾ x 3.6 = (¾ of 3.6) 3.6 ÷ 4 = 0.9 0.9 x 3 = 2.7 ¾ x ½ = 3 x 1 = 3 4 x 2 8 ¾ ÷ ½ = 3 x 2 = 6 4 x 1 4 7.2 ÷ 0.4 = 7.2 ÷ 0.8 = 9 7.2 ÷ (0.8 ÷ 2) = (9 x 2) 7.2 ÷ 0.4 = 18