Term by Term Objectives

Year 5

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Multiplication and Division Multiply and divide numbers mentally drawing upon known facts.	• 8 x 6 = 48. Use this to help you find the answers to the number sentences: 48 ÷ 6 = 6 x 80 = • Write down five multiplication and division facts that use the number 48. • If I know 8 x 36 = 288, I also know 8 x 12 x 3 = 288 and 8 x 6 x 6 = 288. If you know 9 x 24 = 216, what else do you know?	• How can you use 10 x 7 to help you find the 9th multiple of 7? • Find the answer: 2 x 11 = 4 x 11 = 2 x 12 = 4 x 12 = 2 x 13 = 4 x 13 = What is the connection between the results for the two times table and the four times table? If 2 x 144= 288, what is 4 times 144? • To multiply a number by 25 you multiply by 100 and then divide by 4. Use this strategy to solve. 84 x 25 28 x 25 5.6 x 25	• 40 cupcakes cost £3.60, how much do 20 cupcakes cost? How much do 80 cupcakes cost? How much do 10 cupcakes cost? • If 8 x 24 = 192, how many other pairs of numbers can you write that have the product of 192? • 10 times a number is 4350, what is 9 times the same number? Explain your working.

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National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Multiplication and Division Multiply and divide whole numbers by 10, 100 and 1000.	• Solve: 345 x 10 = 345 x 100 = • Fill the gaps: 3790 x ⬛ = 379000 3790 ÷ ⬛ = 379 ⬛ X 1000 = 497200 • Harry has £20, he wants to save 10 times this amount. How much more does he need to save?	• Claire says 'When you multiply a number by 10 you just add a nought and when you multiply by 100 you add two noughts.' **Do you agree? Explain your answer.** • Apples weigh about 160g each. How many apples would you expect to get in a 2kg bag? Explain your reasoning. • **6 x 7 = 42** How can you use this fact to solve the following calculations? 4200 ÷ 70 = 0.6 x 0.7 =	• Here are the answers to the questions. Can you write three different questions that could make these numbers by multiplying and dividing by 10, 100 or 1000? **5890, 40, 67000, 2000** • David has £35700 in his bank. He divides the amount by 100 and takes that much money out of the bank. Using the money he has taken out he spends £268 on furniture for his new house. How much money does David have left from the money he took out? Show your working.

National Curriculum Statement	All Students		
	Fluency	**Reasoning**	**Problem Solving**

Decimals

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.

Fluency

- Complete the grid:

	×100	÷1000	×10
365			
2669			
12			

- Fill in the boxes:

  ▢ × 100 = 38

  56 ▢ = 5.6

  0.8 x 1000 = ▢

- Some facts have been cut up. Work with a partner to put them back together.
  e.g. 74 ÷ 10 = 7.4

  | 100 |

  | 31 |

  | ×100 |

  | ÷1000 |

  | 3100 |

  | =0.031 |

  | ÷100 |

  | 31 |

  | = 1 |

Reasoning

- **True or false?**
  When you multiply whole and decimal numbers by 10, 100 or 1000, you just add noughts on to the end.

- If 5 x 4 = 20

  Explain why these facts are true without working them out:

  $0.5 \times 4 = 2$
  $200 \div 4 = 50$
  $0.4 \times 0.5 = 0.2$

Problem Solving

- Put these calculations in order from smallest to biggest:

  100 x 540

  5.4 x 1000

  5400 ÷ 10

  5400 ÷ 1000

  540 ÷ 10

- Using a number from column A, an operation from B and a number from C, how many ways can you find to make 70? (There are more than 4 ways!)

A	B	C
7	X	1
70		10
700	÷	100
7000		1000

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	All students		
National Curriculum Statement	**Fluency**	**Reasoning**	**Problem Solving**
Multiplication and Division Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers.	• Solve the calculations: $$\begin{array}{r} 3\ 4\ 6 \\ \times\quad 2\ 7 \\ \hline \end{array} \qquad \begin{array}{r} 4\ 9\ 2\ 3 \\ \times\quad 3\ 1\ 4 \\ \hline \end{array}$$ • Calculate: 5612 x 4 654 x 34 • Mo Farah runs 135 miles a week. How far does he run each year?	• Spot the mistake and make a correction. $$\begin{array}{r} 527 \\ \times\ \ 42 \\ \hline 10540 \\ \underline{2018} \\ 12648 \end{array}$$ • Laura thinks that a 4 should be placed in the empty box. Do you agree? 4 7 ☐ x 2 3 1 0 9 0 2 • What goes in the missing box? 12 ☐ 2 ÷ 6 = 212 14 ☐ 4 ÷ 7 = 212 Prove your answer.	• Using the digits 1, 2, 3 and 4 in any order in the bottom row of the number pyramid, how many different totals can you make? What is the smallest/ largest total? • Find the missing digits: 5 2 ☐ x ☐ 7 1 5 ☐ 3 0 ☐ 3 6 4 7 1 ☐ 2 7 7 • Start with 0; choose a path through the maze. Which path has the highest/ lowest total? | S | +6 | X5 | X2 | -4 | | +7 | X8 | +9 | X7 | X6 | | X5 | +3 | X4 | +9 | E |

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Term by Term Objectives

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Multiplication and Division — Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context.	• Calculate $68 \div 4 =$ $1248 \div 3 =$ • Find the missing numbers: ☐ x 5 = 475 3 x ☐ = 726 • 194 pupils are going on a school trip. One adult is needed for every 9 pupils. How many adults are needed?	• What number goes in the box? 323 x ☐ 1 = 13243 Prove it. • Correct the errors in the calculation below. Explain the error. $266 \div 5 = 73.1$ 7 3 r 1 5 ⟌ 2 ³6 ¹6 • Andrew says that the answer to 166 divided by 4 can be written as '46 remainder 2' or as '46.5'. Do you agree? Explain your reasoning.	• The answer to the division has no remainders. Find the missing numbers. 8 ☐ 2 7 ⟌ 5 8 9 ☐ • I am thinking of a number. When it is divided by 9, the remainder is 3. When it is divided by 2, the remainder is 1. When it is divided by 5, the remainder is 4. What is my number? • When 59 is divided by 5, the remainder is 4 When 59 is divided by 4, the remainder is 3 When 59 is divided by 3, the remainder is 2 When 59 is divided by 2, the remainder is 1 Can you find the smallest number with the property that when it is divided by each of the numbers 2 to 10, the remainder is always one less than the number it is has been divided by?