Townhill Junior School Maths Overviews

Year 3 Autumn term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number and Place Value Numbers to 1000		Addition and subtraction					Multiplication and Division			Further Multiplication and Division	
Key learning	-To learn to count in hundreds and understand the place value. Pupils will also understand how many hundreds are needed to make 1000. – To compose and decompose numbers consisting of hundreds, tens and ones. – To understand the value of each digit in a 3-digit number. – To be able to compare and order numbers. – To be able to count in fifties. – To recognise, describe and continue a number pattern. – To be able to recognise, describe and complete more complicated number patterns. – To be able to count in fours and eights.		-To understand the commutative law of addition and the corresponding addition and subtraction facts. – To add a 3-digit number to a 1-digit number with no regrouping or renaming. – To add a 3-digit number to a multiple of 10 (2-digit number) without regrouping or renaming. – To add multiples of 100 to a 3-digit number. without regrouping or renaming. – To add two 3-digit numbers without regrouping or renaming; introduction of the column method of addition. – To add a 3-digit number to a 1-digit number, with renaming. – To add with renaming in tens. – To add two 3-digit numbers with renaming the ones. – To add two 3-digit numbers with renaming the tens. –To add with renaming in ones and tens. –To do simple subtraction by taking away a 1-digit number from a 2-digit number without renaming. – To do simple subtraction by taking away a 1-digit number from a 3-digit number without renaming. – To subtract multiples of 10, up to 90, from a 3-digit number. –To subtract hundreds from a 3-digit number and to subtract multiples of 1 and 10 from a 3-digit number. –To understand simple subtraction of a 3-digit number by another 3-digit number using the column method. –To subtract with renaming in tens and ones. –To subtract with renaming hundreds. –To subtract with regrouping tens and hundreds. –To subtract a 3-digit number with zeros. –To solve addition and subtraction problems using the bar model. –To use the bar model to solve problems. –To solve complicated problems involving addition and subtraction using a comparative bar model heuristic. –To solve more complicated problems involving addition and subtraction using a comparative bar model heuristic.				-To multiply by 3. –To multiply by 3 using relational properties. –To multiply by 4. –To multiply by 4. –To multiply by 4 and 8. –To multiply by 8; to use commutative law to multiply. –To multiply by 8. –To divide by 3. –To divide by 4. –To find relationships between multiplication and division. –To divide by 4 and 8. –To solve word problems with multiplication. – To solve word problems that involve division. –To solve more word problems involving multiplication and division using the bar model heuristic. –To solve problems using a variety of strategies.		-To multiply multiples of 10 by a 1-digit number. – To multiply any 2-digit number by a 1-digit number. –To multiply more 2-digit numbers. – To multiply with regrouping. – To multiply with regrouping. –To understand simple division of a 2-digit number by a 1-digit number. –To divide where there is a need to regroup. –To use long division to divide. –To solve word problems that involve multiplication. –To solve word problems involving division. –To solve more challenging word problems.

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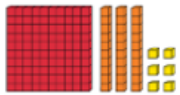
Key representations:



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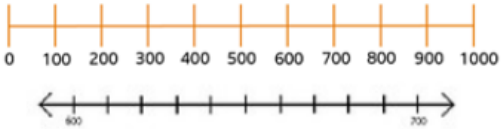
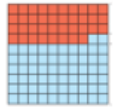
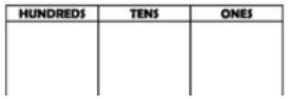
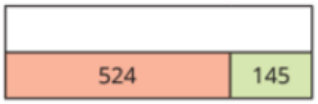
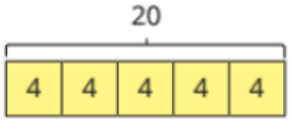






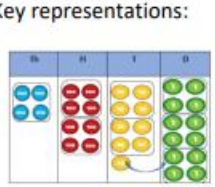


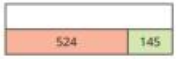


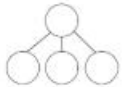
Townhill Junior School Maths Overviews

Year 4 Autumn Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number and Place value: Numbers to 10,000			Addition and Subtraction within 10,000				Multiplication and Division				Further multiplication and Division
Key learning	– To count in hundreds and twenty-fives. –To count in thousands. – To count in thousands, hundreds, tens and ones. –To use an understanding of place value to count. –To understand place value in a 4-digit number. – To compare and order numbers. –To compare and order 4-digit numbers. – To make number patterns (100, 10, 1 more and less). –To make number patterns (4-digit numbers). – To count in sixes, sevens and nines. –To round numbers to the nearest 1000. –To round numbers to the nearest 10, 100 and 1000. – To round numbers to estimate. – To round numbers to estimate.			– To find totals and sums. – To add without renaming. – To add with renaming (in the ones column). – To add with renaming (in tens and ones). – To add with renaming (in hundreds, tens and ones). –To add using mental strategies (making tens, hundreds and thousands). –To add using mental strategies. –To find the difference. –To subtract without renaming (column subtraction). –To subtract with renaming (in tens and ones). –To subtract with renaming (in hundreds, tens and ones). –To subtract with renaming (in hundreds, tens and ones). –To subtract with renaming. –To subtract using mental strategies. –To solve addition and subtraction word problems. –To solve word problems (addition and subtraction). –To solve multi-step word problems.				–To find totals and sums. –To add without renaming. –To add with renaming (in the ones column). –To add with renaming (in tens and ones). –To add with renaming (in hundreds, tens and ones). –To add using mental strategies (making tens, hundreds and thousands). –To add using mental strategies. –To find the difference. –To subtract without renaming (column subtraction). –To subtract with renaming (in tens and ones). –To subtract with renaming (in hundreds, tens and ones). –To subtract with renaming (in hundreds, tens and ones). –To subtract with renaming. –To subtract using mental strategies. –To solve addition and subtraction word problems. –To solve word problems (addition and subtraction). –To solve multi-step word problems.			–To multiply by 0 and 1. –To divide by 1. –To understand commutativity. –To multiply three numbers. –To multiply with multiples of 10.

Key representations:







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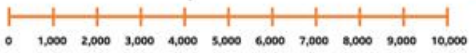

Townhill Junior School Maths Overviews

Year 5 Autumn Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number and Place Value Numbers to 1,000,000			Addition and subtraction		Multiplication and Division				Word problems	Statistics: graphs	
Key learning	– To read and represent numbers to 100 000. – To read and represent numbers to 1 000 000. –To read and represent numbers to 1 000 000 using number discs. – To compare numbers to 1 000 000 using place value. – To compare numbers to 1 000 000 using place value. – To compare numbers to 1 000 000 using pictorial representations and proportionality. – To compare numbers to 1 000 000 from pictorial representations, using lists and number lines. – To make and identify patterns in numbers using knowledge of place value. – To make number patterns that decrease in multiples of 10 000 or 100 000. – To round numbers to the nearest 10 000 using number lines and bar graphs. – To round numbers to the nearest 100 000 using number lines and bar graphs. – To round numbers to the nearest 100, 1000, 10 000 and 100 000 using number lines.			-To add using the 'counting on' strategy with concrete materials and number lines. – To subtract using the 'counting backwards' strategy with concrete materials. – To add numbers within 1 000 000 using rounding and concrete materials. – To use addition and subtraction to solve comparison problems with numbers to 1 000 000. – To add numbers within 1 000 000 using the column method of addition. – To subtract using the column method, number bonds and number discs using numbers to 1 000 000. – To add and subtract using number bonds as a key strategy using numbers within 1 000 000. – To consolidate and refine addition skills and place-value knowledge to solve addition problems. – To subtract numbers to 1 000 000 using concrete materials, the column method and number bonds. – To consolidate and refine subtraction skills and place-		-To consolidate and review multiplication; to find the result of multiplying by a number. – To consolidate and review multiplication; to find the numbers we can multiply by to get a number. – To define and find common factors of numbers to 100. – To identify and name the prime numbers; to recognise prime numbers as numbers that only have 2 factors. – To define and determine prime numbers to 100. – To create and determine square and cubed numbers. – To multiply 1- and 2-digit numbers by 10, 100 and 1000. – To multiply 2- and 3-digit numbers by a 1-digit number using multiple strategies. –To multiply 4-digit numbers by 1-digit numbers. – To multiply 4-digit numbers by 1-digit numbers with regrouping, using a variety of strategies. – To multiply a 4-digit number by a 1-digit number, with regrouping from the ones, tens and hundreds, using multiple methods. – To multiply 2-digit numbers by 2-digit numbers using multiple methods. – To multiply a 2-digit number by a 2-digit number using multiple methods, including the grid method, number bonds and column method, with regrouping. – To multiply a 3-digit number by a 2-digit number, with the grid method and column method as key strategies. -To multiply a 3-digit number by a 2-digit number with regrouping, using the column method as the key strategy. – To find thousands, hundreds and tens in a 4-digit number using concrete materials. – To divide 3- and 4-digit numbers by 1-digit numbers, using number bonds and long division as the key methods. – To divide 4-digit numbers by 1-digit numbers, using number bonds and long division as the key methods. – To divide 3-digit numbers by 1-digit numbers, using long division, short division and mental methods, that give rise			-To solve word problems involving multiple operations; to identify the operation needed to carry out the plan. – To solve word problems involving multiplication and division using bar models as the main heuristic. – To solve word problems involving multiple operations, identifying key information and representing information using bar model diagrams. – To solve word problems involving multiple operations, using bar models as they key heuristic	-To read the information presented in a table and interpret its meaning. – To read and respond to information presented in a table. – To read and respond to tables that have a variety of data sets. – To read and interpret information provided in a line graph where a single line represents the data. – To read and interpret information presented on a line graph where the data is represented by more than one line. – To read and interpret information presented on a line graph where the data is represented by more than one line. – To read and interpret information presented in a table and turn it into a line graph; to determine relationships between data sets.	

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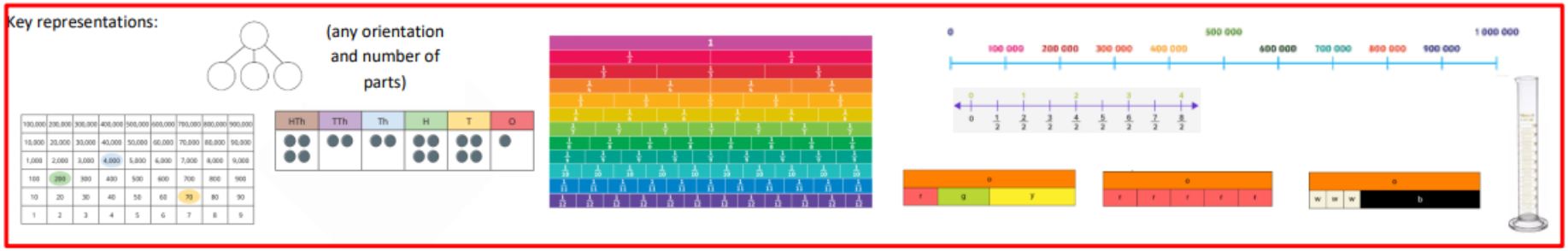
		value knowledge to solve subtraction problems. – To consolidate and refine subtraction skills and place-value knowledge to solve subtraction problems.	to remainders.	to represent key information.	



Townhill Junior School Maths Overviews

Year 6 Autumn Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Unit title	Number and Place Value Numbers to 10 million	Four operations on whole numbers				Fractions, decimals and percentages: Fractions			Fractions, decimals and percentages: Decimals			Measurements
Key learning	-To create and identify numbers to 10 000 000 ; to write in numerals and words numbers to 10 000 000. – To construct and record numbers to 10 000 000; to recognise the value of digits to 10 000 000. – To recognise and construct numbers to 10 000 000 using an abacus; to recognise the value of digits in numbers to 10 000 000 and write numbers using numerals and words. – To compare numbers to 10 000 000 using place value.	To use multiple operations and create expressions from a picture; to use the order of operations to solve expressions. Lesson 2 – Using Mixed Operations To create and solve expressions using the four operations. Lesson 3 – Multiplying by 2-Digit Numbers To multiply numbers by multiples of 10; to use number bonds as a key strategy in multiplication. Lesson 4 – Multiplying by 2-Digit Numbers To multiply 3- and 4-digit numbers by 2-digit numbers without regrouping or renaming; to use both number bonds and the column method as key strategies. Lesson 5 – Multiplying by 2-Digit Numbers To multiply 3- and 4-digit numbers by 2-digit numbers without regrouping or renaming; to use both number bonds and the column method as key strategies. Lesson 6 – Multiplying by 2-Digit Numbers To multiply 3- and 4-digit numbers by 2-digit numbers with regrouping and renaming; to use number bonds and pattern recognition as key strategies for multiplication. Lesson 7 – Multiplying by 2-Digit Numbers				-To use concrete materials to simplify fractions; to recognise equivalence in fractions to 1 /4. – To simplify fractions using division and common factors; to represent fractions using concrete materials and pictorial representations. – To compare fractions and place them in order from smallest to largest. – To compare and order fractions by finding common denominators. – To compare and order fractions using common factors. – Adding and subtracting fractions with different denominators; using pictorial representations to compare fractions and add/subtract. – To add and subtract fractions of different denominators; to develop questions and word problems based on the information provided. – To add and subtract fractions with different denominators. – To add and subtract mixed numbers, including fractions with different denominators; to subtract from the whole and add the remainder back on.			-To read and write decimals to thousandths; to use concrete materials to represent decimals. – To divide whole numbers by larger whole numbers; to use Base 10 materials to represent tenths, hundredths and thousandths. – To divide whole numbers that give rise to decimals; to calculate decimal fraction equivalents using long division. – To convert fractions into decimals using bar models and long division. – To write fractions as decimals; to use long division as the key strategy for turning fractions into decimals. – To multiply decimals by whole numbers using partitioning or the worded method to help find the solution. – To multiply whole numbers that include a decimal by other whole numbers; to use partitioning and the worded method as key strategies. – To multiply decimals by whole numbers, including regrouping and renaming. – To multiply decimals by whole numbers using a variety of methods; to use the heuristic 'making a list' to help solve a problem. – To divide decimals using number bonds and number discs as the key strategies.		-To convert common measurements into metres, centimetres and millimetres. – To convert units of measure into different units; to use knowledge of decimals and fractions to help convert units. – To convert metres into kilometres as units of measure. – To convert units of mass from grams to kilograms using decimals and fractions. – To convert units of volume from millilitres to litres

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	– To compare and order numbers to 10 000 000; to create combinations of numbers using a fixed number of digits. – To round numbers to 10 000 000 to the nearest million, hundred thousand and ten thousand. – To round numbers to the nearest appropriate number up to and including millions; to determine when rounding is appropriate and to which value.	To multiply 3- and 4-digit numbers by 2-digit numbers with regrouping and renaming; to use number bonds and the column method as key strategies. Lesson 8 – Estimating Products of Large Numbers To estimate products of multiplying 3- and 4-digit numbers by a 2-digit numbers; to use knowledge of multiplication to create specific products. Lesson 9 – Dividing by 2-Digit Numbers To divide 3-digit numbers by 2-digit numbers using a variety of strategies; to use number bonds, long division and bar models to facilitate division by 2-digit numbers. Lesson 10 – Dividing by 2-Digit Numbers To divide 4-digit numbers by 2-digit numbers; to use number bonds and long division as the key strategies. Lesson 11 – Dividing by 2-Digit Numbers To divide 4-digit numbers by 2-digit numbers using a variety of methods; to use number bonds, long and short division as key methods. Lesson 12 – Dividing by 2-Digit Numbers To divide 3-digit numbers by 2-digit numbers giving rise to remainders; to use number bonds and long and short division as key strategies to solve division problems. Lesson 13 – Dividing by 2-Digit Numbers To divide 4-digit numbers by 2-digit numbers giving rise to a remainder; to represent the remainder as part of a whole amount of money or decimal. To use the bar model heuristic to solve word problems involving multiplication and division. Lesson 15 – Solving Word Problems To solve word problems using division as the main strategy; to use pictorial representations to support word problems. Lesson 16 – Solving Word Problems To solve word problems involving multiple operations, including multiplication and division.	– To add and subtract fractions with different denominators; to add and subtract mixed numbers. –To multiply fractions using pictorial representations and abstract methods. – To determine if the commutative law applies to fractions; to multiply fractions using concrete materials and pictorial representations. – To use concrete materials to understand and solve the multiplication of fractions; to simplify equations using pattern blocks. – To divide a fraction by a whole number; to use pictorial representation to divide whole numbers into fractions. – To divide fractions by whole numbers using concrete materials and pictorial representations; to divide fractions when the numerator and divisor are not easily divisible. – To divide fractions by a whole number; to use pictorial representations to support division.	– To divide decimals using bar models, number bonds and long division as key strategies, including regrouping and renaming. – To multiply decimals by a 2-digit whole number using number discs and the column method. – To divide decimals by 2-digit numbers using number bonds and the worded method. – To divide decimals by 2-digit whole numbers using number bonds and the worded method.	

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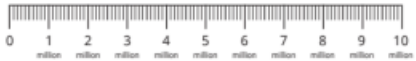
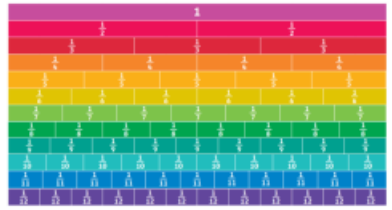
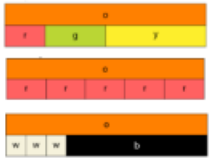
		Lesson 17 – Finding Common Multiples To find common multiples in real-life situations; to use common multiples in tandem with knowledge of time. Lesson 18 – Finding Common Multiples To use common multiples to solve problems; to organise mathematical thinking into tables and lists. Lesson 19 – Finding Common Factors To find the largest common factor of 3-digit numbers; to use multiplication and division to find largest common factors. Lesson 20 – Finding Common Factors To find common factors using concrete materials. Lesson 21 – Finding Prime Numbers To use prime numbers to create other numbers; to explore prime numbers above 100. Lesson 22 – Finding Prime Numbers To explore prime numbers using concrete materials; to identify prime numbers using multiplication or division.			

Key representations:



Millions	Thousands			Ones		
O	H	T	O	H	T	O
4	2	8	7	2	9	5





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