Arithmetic skills progression

St Thomas Catholic Academy

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| **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Number of the day  Fact families up to 10  Partitions numbers up to 100 using a variety of pictorial representations moving into the abstract to secure place value knowledge. | **Autumn**  Representing numbers to 100  Comparing numbers  Partitioning 2-digit numbers using part whole model  Fact families up to 20  Use known facts e.g. 7 + 2 = 9 so 70 + 20 = 90  +/- ones from a 2-digit number  10 more/10 less from 2-digit numbers  +/- multiples of 10 to/from a multiple of 10  +/- multiples of 10 to/from a 2-digit number  + 2-digit and 1-digit number crossing 10  - 1-digit from a 2-digit crossing 10  + using column method not crossing 10  + using the column method crossing 10  - using the column method not crossing 10  - using the column method crossing 10  Bonds to 100 e.g. 39 + \_\_\_ = 100  + 3, 1-digit numbers | **Autumn**  1/10/100 more or less  Count in 50s  Partition numbers e.g. 789 = 700 + 80 + 9  +/- multiples of 10/100 using known facts 9 – 2 = 7, 90 – 20 = 70, 900 – 200 = 700  x/÷by 2, 5 and 10  +/- a 1-digit number to a 2/3-digit number (crossing tens)  +/- multiples of 10 to a 2/3-digit number e.g. 456 + 30  +/- multiple of 100 e.g. 148 + \_\_\_\_ = 648  Column method no exchange  Column method exchange | **Autumn**  Round to 10/100/1000  Count in 1000s  Partition 4-digit numbers e.g. 8345 = 8000 + 300 + 40 + 5  1/10/100/1000 more or less  Roman numerals and calculations with Roman numerals  Column method +/- with exchange  Subtract by counting on e.g. 804 – 796  x by 10 and 100  ÷ by 10 and 100  x by 1 and 0 e.g. 4 x 3 x 1 or 4 x 0 x 3  ÷ by 1 and itself e.g. 9 ÷ 1 and 9 ÷ 9  x/÷ 3, 6, 9 and 7 | **Autumn**  Round numbers to the nearest 10/100/1000/10000/100000  Roman numerals and calculations with Roman numerals  Compare numbers to 1,000,000  + and – numbers with exchange  Multiples/factors  Squared and cubed numbers  x/÷ by 10, 100 and 1000 | **Autumn**  +/- numbers up to 1,000,000  Short and long x  Short and long ÷ including decimal remainders  Factors  Multiples  Prime numbers  Squared and cubed numbers  Order of operations  Improper fractions to mixed numbers and vice versa  x/÷ by 10, 100 and 1000  10% and 1% of an amount  +/- fractions  +/- mixed numbers  x fractions by whole numbers  x fractions by fractions  divide fractions by whole numbers  Find fractions of an amount |
| **Spring**  Autumn term objectives and  Double numbers up to double 15  x number sentences e.g. 5 x 2 = 10  (for 2x,5x and 10x tables)  ÷ by 2, 5 and 10 number sentences  Find ½, 1/3 and ¼ of a number | **Spring**  Autumn term objectives and  x/÷by 3, 4 and 8  Short multiplication no exchange e.g. 24 x 2  Short multiplication exchange e.g. 36 x 3  Find 1/2, 1/3 and ¼ of a number  +/- fractions with same denominators  Double and halve numbers up to 100 | **Spring**  Autumn objectives and  x 3 numbers e.g. 5 x 2 x 6  3-digit x 1-digit with exchange  x and ÷ by 11/12  +/- fractions with same denominator  + more than 2 fractions (same denominator)  Whole number subtract a fraction  Fractions of amount  Short division  Double and halve numbers up to 1,000 | **Spring**  Autumn objectives and  Short and long multiplication up to 4-digit by 2-digit  Short division up to 4-digits  Short division with remainders  Converting improper fractions to mixed numbers and vice versa  +/- fractions  + more than 2 fractions  +/- mixed numbers  x fractions by whole numbers  Find a fraction of an amount | **Spring**  Autumn objectives and  Equivalent fractions  Simplifying fractions  % of amounts – all percentages  Algebra and ratio problems |
| **Summer**  All Autumn and Spring objectives | **Summer**  All Autumn and Spring objectives | **Summer**  All Autumn and Spring objectives | **Summer**  Autumn and Spring objectives and  Find 10% of a number by dividing by 10  Double and halve numbers up to 10,000 | **Summer**  All Autumn and Spring objectives |