**Medium term Plans Autumn Year 6 1st half 2017-18**

| **Week** | **National Curriculum Programmes of study** | **Main focus of teaching and activities each day** | **Starter** | **Outcomes of each day** |
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| 1 | read, write, order and compare numbers up to 10 000 000 and determine the value  of each digit  solve addition and subtraction multi-step problems in contexts, deciding which  operations and methods to use and why  solve problems involving addition, subtraction, multiplication and division  Pupils use the whole number system, including saying, reading and writing numbers  accurately. | ***Place value/Addition***  **Day 1:** Place value in 6-digit numbers (PV additions/subtractions).  **Day 2:** Add and subtract 1s, 10s, 100s, 1000s, 10,000s and 100,000s.  **Day 3:** Place 6-digit numbers on a line and compare pairs of numbers; use < and >.  **Day 4:** To round 6-digit numbers to the nearest 1000, 10,000, and 100,000  **Day 5:** To use negative numbers in context, and calculate intervals across zero | **Day 1:** Order 5-digit numbers.  **Day 2:** Count in steps of 1 though multiples of 100, 1000, 10,000 and 100,000.  **Day 3:** Place value in 6-digit numbers.  **Day 4:** Add 2-digit numbers.  **Day 5:** x tables | ***Place value/Addition***  **Day 1:** 1. Partition 6-digit numbers into 100,000s, 10,000s, 1000s, 100s, 10s and 1s. 2. Say what each digit represents in 6-digit numbers. 3. Complete place value additions and subtractions.  **Day 2:** 1. Add/subtract 1s, 10s, 1000s, 10,000s and 100,000s to/from 6-digit numbers.  **Day 3:** 1. Compare 6-digit numbers using > and < signs. 2. Place 6-digit numbers on 0–1,000,000 landmarked lines and begin to place on empty 0–1,000,000 lines.  **Day 4**: Round 6-digit numbers to the nearest 1000, 10,000, and 100,000  **Day 5:** use negative numbers in context, and calculate intervals across zero |
| 2 | read, write, order and compare numbers up to 10 000 000 and determine the value  of each digit  solve addition and subtraction multi-step problems in contexts, deciding which  operations and methods to use and why  solve problems involving addition, subtraction, multiplication and division  Pupils use the whole number system, including saying, reading and writing numbers  accurately.  identify the value of each digit in numbers given to three decimal places and multiply  and divide numbers by 10, 100 and 1000 giving answers up to three decimal places  round any whole number to a required degree of accuracy | ***Decimals/Addition* Day 1:** Understand place value in numbers with three decimal places.  **Day 2:** Multiply and divide by 10, 100 and 1000.  **Day 3:** Place numbers with 3 decimal places on lines; round to the nearest 0.01, 0.1 or 1; Compare 2 numbers.  **Day 4:** Add 2 or 3 amounts of money using column addition; Use rounding to check answers.  **Day 5:** Add 2 or 3 numbers with 2 decimal places in a measures context, e.g. metres; Use rounding to check answers. | **Day 1:** Place numbers with 2dp on a line.  **Day 2:** Count in steps of 0.01 and 0.1 through multiples of 0.1 and 1.  **Day 3:** Round numbers with 2dp to nearest 1 and 0.1.  **Day 4:** roman numerals  **Day 5:** x tables | ***Decimals/Addition***  **Day 1:**  Understand the effect of multiplying and dividing by 10, 100 and 1000. 2. Understand place value in numbers with 3 decimal places. 3. Solve place value addition and subtractions.  **Day 2:**. Understand the effect of multiplying and dividing by 10, 100 and 1000. 2. Understand place value in numbers with 3 decimal places.  **Day 3**: Place numbers with 3 decimal places on landmarked and empty number lines.  2. Use knowledge of decimals to solve puzzles.  **Day 4:**  Use column addition to add three amounts of money, e.g. £45.78 + £25.79 + £24.85.  **Day 5:** . Use column addition to add three distances, e.g. 9.34m + 6.45m + 4.78m. 2. Use rounding to estimate totals. |
| 3 | solve addition and subtraction multi-step problems in contexts, deciding which  operations and methods to use and why  solve problems involving addition, subtraction, multiplication and division  Pupils use the whole number system, including saying, reading and writing numbers  accurately. | ***Addition and subtraction* Day 1:** Add several prices, find change from £50 and £100.  **Day 2:** subtract amounts of money.  **Day 3:** Revise using column subtraction to subtract pairs of 5-digit numbers.  **Day 4:** Use column subtraction to subtract 3-digit numbers and 4-digit numbers from 5-digit numbers.  **Day 5:** Choose whether to use counting up or column subtraction to work out given calculations (5 digits). | **Day 1:** Bonds to £1.  **Day 2:** Change from £20.  **Day 3:** Subtraction facts.  **Day 4:** Mental subtraction of 2-digit numbers.  **Day 5:** 24-hour clock. | ***Addition and subtraction* Day 1:** Add several prices, then find the change from £50 and £100 using counting up  **Day 2:**  Find the difference between 5-digit prices using counting up  **Day 3:** Use column subtraction to subtract pairs of 5-digit numbers.  **Day 4:** Use column subtraction to subtract 3-digit and 4-digit numbers from 5-digit numbers.  **Day 5:** Choose method to subtract pairs of 5-digit numbers. |
| 4 | compare and classify geometric shapes based on their properties and sizes and find  unknown angles in any triangles, quadrilaterals, and regular polygons  illustrate and name parts of circles, including radius, diameter and circumference and  know that the diameter is twice the radius | ***Shape and angles***  **Day 1:** Name parts of circles.  **Day 2:** Classify and sort quadrilaterals.  **Day 3:** Revise angles round a point on a line; Find missing angles.  **Day 4:** Know the totals of angles inside triangles and inside quadrilaterals and use to find missing angles.  **Day 5:** Find that opposite angles are equal; find angles in polygons. | **Day 1:** Describe 2D shapes.  **Day 2:** Find lines of symmetry.  **Day 3:** Recognise acute, obtuse, reflex angles.  **Day 4:** Times tables.  **Day 5:** Division facts. | ***Shape and angles***  **Day 1:** Name parts of circles (radius, diameter, circumference) and know that the diameter is twice the radius.  **Day 2:**  Sort quadrilaterals.  **Day 3:** Know that angles around a point add up to 360° and use this to work out missing angles.  **Day 4:**  Know the totals of angles inside triangles and quadrilaterals and use this and rules about angles on a straight line and about a point to find missing angles.  **Day 5:**  Know that opposite angles are equal. 2. Find angles in polygons. |
| 5 | identify common factors, common multiples and prime numbers  use common factors to simplify fractions; use common multiples to express fractions  in the same denomination  compare and order fractions, including fractions > 1 | ***Multiplication and division/Fractions***  **Day 1:** Find common multiples and factors.  **Day 2:** Identify prime numbers, recognising their properties; Find numbers which have a pair of prime factors.  **Day 3:** Find equivalent fractions; Simplify fractions using multiples and factors.  **Day 4:** Compare and order fractions with unrelated denominators.  **Day 5:** Find unit and non-unit fractions of amounts. | **Day 1:** Double and halve numbers to 100.  **Day 2:**  Factors.  **Day 3:**  Factors and multiples.  **Day 4:** Divisibility by 2, 3, and 5.  **Day 5:** Fractions of amounts within tables. | ***Multiplication and division/Fractions***  **Day 1:**  Recognise common multiples and find highest common factors.  **Day 2:**  List prime numbers to at least 20. 2. Find numbers that have pairs of prime factors.  **Day 3:** . Recognise equivalent fractions. 2. Simplify fractions.  **Day 4:**  Compare fractions with unrelated denominators.  **Day 5:**  Find non-unit fractions of numbers using short division and mental multiplication. |
| 6 | read, write, order and compare numbers up to 10 000 000 and determine the value  of each digit  multiply multi-digit numbers up to 4 digits by a two-digit whole number using the  formal written method of long multiplication | ***Number/Multiplication*  Day 1:** Place 5-digit numbers on a line, rounding to nearest 10, 100 or 1000.  **Day 2:** Place 6-digit numbers on a line and round to nearest 10, 100, 1000, 10,000 or 100,000.  **Day 3:** Revise using short multiplication to multiply 4-digit numbers by single-digit numbers; Round to approximate answers.  **Day 4:** Revise using short multiplication to multiply 4-digit numbers by single-digit numbers; Use rounding to approximate answers.  **Day 5:** Revise using short multiplication to multiply 4-digit amounts of money by single-digit numbers. | **Day 1:** Count on/back in 25s from 4-digit numbers.  **Day 2:** Times tables.  **Day 3:** Multiply by multiples of 10 (e.g. 7 × 80).  **Day 4:** Multiply by multiples of 100 (e.g. 7 × 800).  **Day 5:** Find the time later using 24-hour clock. | ***Number/Multiplication*  Day 1:** . Place 5-digit numbers on a line and round to the nearest 10, 100 or 1000.  **Day 2:**  Place 6-digit numbers on a line and round to the nearest 10, 100, 1000, 10,000 or 100,000.  **Day 3:**. Use short multiplication to multiply 4-digit numbers by single-digit numbers. 2. Round 4-digit numbers to the nearest 100 to make approximations.  **Day 4:**  Use short multiplication to multiply 4-digit numbers by single-digit numbers. 2. Round 4-digit numbers to the nearest 100 to make approximations.  **Day 5:**  Use short multiplication to multiply 4-digit prices by single-digit numbers.  2. Round 4-digit prices to the nearest pound to make approximations. |
| 7 | divide numbers up to 4 digits by a two-digit whole number using the formal written  method of long division, and interpret remainders as whole number remainders,  fractions, or by rounding, as appropriate for the context  divide numbers up to 4 digits by a two-digit number using the formal written method  of short division where appropriate, interpreting remainders according to the context  round any whole number to a required degree of accuracy  associate a fraction with division and calculate decimal fraction equivalents [for  example, 0.375] for a simple fraction [for example, 8  3 ] | ***Fractions/Division* Day 1:** Recognise fraction and decimal equivalents.  **Day 2:** Use short division to divide 3-digit by 1-digt numbers and by 11 and 12; Round up or down.  **Day 3:** Use short division to divide 4-digit numbers by 1-digt numbers and by 11 and 12, with fraction parts of answers, e.g. 23¾.  **Day 4:** Use short division to divide 4-digit numbers by 1-digt numbers, writing fraction parts of answers as decimals, e.g. 23¾ as 23.75.  **Day 5:** Solve division word problems (including answers with fractions); Round up or down after division. | **Day 1:** Count in 1/8s along a number line.  **Day 2:** 12 times table.  **Day 3:** Place 5-digit numbers on a human number line.  **Day 4:** Equivalent fractions, decimals and percentages.  **Day 5:** Mental division. | ***Fractions/Division* Day 1:**  Know decimal equivalents for ½, ¼s, 1/5, 1/8s, 1/10s and 1/100s.  **Day 2:**  Use short division to divide 3-digit by 1-digit numbers and by 11 and 12; Round up or down.  **Day 3:**  Use short division to divide 4-digit numbers by 1-digt numbers and by 11 and 12, with fraction parts of answers, e.g. 23¾.  **Day 4:**  Use short division to divide 4-digit numbers by 1-digt numbers and by 11 and 12, writing fraction parts of answers as decimals, e.g. 23¾, as 23.75.  **Day 5:**  Decide whether to round up, round down or give an exact answer after division depending on the context. |