**St. Mary’s Catholic Primary School AUTUMN Maths Medium Term plan**

**Year 6 St Christopher/ St. Catherine Mrs Brennan/Miss Carberry**

**Assertive mentoring outcomes annotated in red**

**There is an additional investigation or problem-solving activity for each week, plus some links to suitable websites for other possible activities.**

| **Week** | **Main focus of teaching and activities each day** | **Starter** | **Outcomes of each day** |
| --- | --- | --- | --- |
| 1  W/B 4TH September | ***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:** Revise using column addition to add pairs of 5-digit numbers with 5-digit answers.  **Day 5:** Use column addition to add pairs of 5-digit numbers with 6-digit answers.  [**Giant domino addition**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255)  Explore large numbers by modelling distances in the [**solar system**](http://beakersandbumblebees.blogspot.co.uk/2010/01/toilet-paper.html) | **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:** Roman numerals to 1000 (M). | ***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:** 1. Use column addition to add pairs of 5-digit numbers, with 5-digit answers.  **Day 5:** 1. Use column addition to add pairs of 5-digit numbers, with 6-digit answers.  **Assertive mentoring targets: 1, 3,** |
| 2  w/b  11th September | ***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.  [**Crack the code**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255)  NRICH link: [**Round the Dice: Decimals 2**](http://nrich.maths.org/10428) | **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:** Pairs of numbers with 1dp and a total of 10.  **Day 5:** Complements to the next whole. | ***Decimals/Addition***  **Day 1:** 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:** 1. Understand the effect of multiplying and dividing by 10, 100 and 1000. 2. Understand place value in numbers with 3 decimal places.  **Day 3**: 1. Place numbers with 3 decimal places on landmarked and empty number lines.  2. Use knowledge of decimals to solve puzzles.  **Day 4:** 1. Use column addition to add three amounts of money, e.g. £45.78 + £25.79 + £24.85.  **Day 5:**  1. Use column addition to add three distances, e.g. 9.34m + 6.45m + 4.78m. 2. Use rounding to estimate totals.  **ASSERTIVE MENTORING TARGETS: 1, 5,6** |
| 3  w/b  18th September | ***Addition and subtraction* Day 1:** Add several prices, then use Frog to find change from £50 and £100.  **Day 2:** Use Frog to subtract amounts of money.  **Day 3:** Revise using column subtraction (decomposition) to subtract pairs of 5-digit numbers.  **Day 4:** Use column subtraction (decomposition) to subtract 3-digit numbers and 4-digit numbers from 5-digit numbers.  **Day 5:** Choose whether to use counting up (Frog) or column subtraction (decomposition) to work out given calculations (5 digits).  [**Nine AGAIN**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255) | **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:** 1. Add several prices, then find the change from £50 and £100 using counting up (Frog).  **Day 2:** 1. Find the difference between 5-digit prices using counting up (Frog).  **Day 3:** 1. Use column subtraction (decomposition) to subtract pairs of 5-digit numbers.  **Day 4:** 1. Use column subtraction (decomposition) to subtract 3-digit and 4-digit numbers from 5-digit numbers.  **Day 5:** 1. Choose Frog or column subtraction to subtract pairs of 5-digit numbers.  **ASSERTIVE MENTORING TARGETS: 6** |
| 4  w/b  25th September | ***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:** Draw 2D shapes to given dimensions; know the totals of angles inside triangles and quadrilaterals; use to find missing angles.  **Day 5:** Find that opposite angles are equal; find angles in polygons.  [**Ellipse in a circle**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255) | **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:** 1. Name parts of circles (radius, diameter, circumference) and know that the diameter is twice the radius.  **Day 2:** 1. Sort quadrilaterals.  **Day 3:** 1. Know that angles around a point add up to 360° and use this to work out missing angles.  **Day 4:** 1. 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.  2. Draw polygons with given lengths and angles.  **Day 5:** 1. Know that opposite angles are equal. 2. Find angles in polygons.  **ASSERTIVE MENTORING TARGETS: 25, 26, 24,** |
| 5  w/b  2nd October | ***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.  [**Magic multiplication squares**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255) | **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:**  1. Recognise common multiples and find highest common factors.  **Day 2:**  1. List prime numbers to at least 20. 2. Find numbers that have pairs of prime factors.  **Day 3:**  1. Recognise equivalent fractions. 2. Simplify fractions.  **Day 4:** 1. Compare fractions with unrelated denominators.  **Day 5:** 1. Find non-unit fractions of numbers using short division and mental multiplication.  **ASSERTIVE MENTORING TARGETS: 4, 7, 11** |
| 6  w/b  9th October  **ASSESSMENT WEEEK**  **W/B**  **16th October** | ***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.  [**The eights have it**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255) | **Day 1:** Count on/back in 25s from 4-digit numbers.  **Day 2:** Multiplication and division facts  **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:**  1. Place 5-digit numbers on a line and round to the nearest 10, 100 or 1000.  **Day 2:** 1. Place 6-digit numbers on a line and round to the nearest 10, 100, 1000, 10,000 or 100,000.  **Day 3:** 1. 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:** 1. 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:** 1. Use short multiplication to multiply 4-digit prices by single-digit numbers.  2. Round 4-digit prices to the nearest pound to make approximations.  **ASSERTIVE MENTORING TARGETS: 1, 3,** |
| 7  w/b 30th October  w/b  **HALF TERM**  **23RD Ooctober – 27th October** | ***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.  [**Awesome answers**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255) | **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:**  1. Know decimal equivalents for ½, ¼s, 1/5, 1/8s, 1/10s and 1/100s.  **Day 2:** 1. Use short division to divide 3-digit by 1-digit numbers and by 11 and 12; Round up or down.  **Day 3:** 1. 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:** 1. 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:** 1. Decide whether to round up, round down or give an exact answer after division depending on the context.  **ASSERTIVE MENTORING TARGETS: 12, 11,** |
| 8  w/b 6th November | ***Decimals/Subtraction* Day 1:** Add/subtract multiples of 0.01 to/from numbers with two decimal places, crossing multiples of 0.1.  **Day 2:** Subtract pairs of numbers with two decimal places using counting up (Frog).  **Day 3:** Subtract numbers with one or two decimal places by counting up from the smaller to the larger number (Frog), e.g. 3.76 – 1.8 or 13.4 – 2.76.  **Day 4:** Count on and back in steps of 0.001 and 0.01.  **Day 5:** Add and subtract multiples of 0.1, 0.01 or 0.001.  [**Dicey differences**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255) | **Day 1:** Double numbers with 1 decimal place.  **Day 2:** Say how much is needed to the next metre.  **Day 3:** Halve numbers with 1 decimal place.  **Day 4:** Convert from m to cm, cm to mm and vice versa.  **Day 5:** Place value in numbers with 3dp. | ***Decimals/Subtraction***  **Day 1:**  1. Add/subtract multiples of 0.01 to/from numbers with two decimal places, crossing multiples of 0.1 and 1.  **Day 2:** 1. Count up to subtract pairs of numbers with one or two decimal places.  **Day 3:** 1. Subtract pairs of numbers, one with one decimal place and the other with two decimal places.  **Day 4:** 1. Count on and back in steps of 0.001 and 0.01.  **Day 5:** 1. Add and subtract multiples of 0.1, 0.01 or 0.001 beginning to cross multiples of 1, 0.1 and 0.01.  **ASSERTIVE MENTORING TARGETS: 5, 6** |
| 9  13th November | ***Measures*  Day 1:** Convert between grams and kilograms, millilitres and litres.  **Day 2:** Convert between metres and kilometres; Know approximate conversion between miles and km; Draw line graph and read intermediate points.  **Day 3:** Know regularly used imperials units and approximate metric equivalents.  **Day 4:** Calculate time intervals using the 24-hour clock and add lengths of time.  **Day 5:** Read timetables using the 24-hour clock; calculate time intervals (at least 3 hours).  [**Weights in a line**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255)  NRICH link: [**Distance Match**](http://nrich.maths.org/10594) | **Day 1:** Multiply and divide by 10, 100 and 1000.  **Day 2**: Starter – Reading scales (weight)  **Day 3:** Starter – Reading scales (capacity)  **Day 4:** Units of time  **Day 5:** Reading bar charts. | ***Measures* Day 1:** 1. Convert between grams and kilograms, millilitres and litres (to one, two or three decimal places).  **Day 2:** 1. Convert between metres and kilometres. 2. Know approximate conversion between miles and km. 3. Draw line graphs and read intermediate points.  **Day 3:** 1. Know regularly used imperial units and approximate metric equivalents. 2. Draw line graphs and read intermediate points.  **Day 4:** 1. Calculate time intervals using the 24-hour clock. 2. Add lengths of times, giving an answer in hours and minutes.  **Day 5:** 1. Read timetables using the 24-hour clock. 2. Calculate time intervals (including over 3 hours).  ASSERTIVE MENTORING TARGETS: 18, 29, |
| 10  w/b  20TH NOVEMBER | **Shape*/Fractions***  **Day 1:** Recognise nets for a cube.  **Day 2:** Recognise and build pyramids and prisms, making nets.  **Day 3:** Use common multiples to express fractions in the same denomination; Compare and order fractions with unrelated denominators.  **Day 4:** Add fractions with unrelated denominators.  **Day 5:** Subtract fractions with unrelated denominators.  [**Domino Fractions**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255) | **Day 1:** Properties of 3D shapes.  **Day 2:** Lowest common multiples.  **Day 3:** Count in 1/8s along a number line.  **Day 4:** Turn improper fractions into mixed numbers & vice versa.  **Day 5:** Equivalence | **Shape*/Fractions***  **Day 1:**  1. Recognise nets for a cube.  **Day 2:** 1. Make nets and use to make polyhedra.  **Day 3:** 1. Compare and order fractions with unrelated denominators.  **Day 4:** 1. Add fractions with unrelated denominators.  **Day 5:** 1. Subtract fractions with unrelated denominators.  **ASSERTIVE MENTORING TARGETS: 23, 12, 8,** |
| 11  W/B  27TH November  w/b 4th REVSION BASED ON GAPS IDENTIFIED THROUGH THE TERM  W/B 11TH December – ASSESSMENT WEEK | ***Multiplication and division/Addition or subtraction* Day 1:** Use grid multiplication to multiply 3-digit numbers by 2-digit numbers.  **Day 2:** Use long multiplication to multiply 3-digit numbers by numbers between 10 and 20.  **Day 3:** Use long multiplication to multiply 3-digit numbers by numbers between 20 and 30.  **Day 4:** Choose how to solve a mix of +, -, × and ÷ mental and written calculations.  **Day 5:** Choose which operation(s) are necessary to solve single-step and multi-step word problems.  [**Stunning squares**](https://www.hamilton-trust.org.uk/browse/maths/y6/autumn/116255) | **Day 1:** Multiply pairs of multiples of 10 and 10s by 100s, e.g. 30 × 40, 30 × 400.  **Day 2:** Mental multiplication.  **Day 3:** Mental division.  **Day 4:** Find squares and cubes.  **Day 5:** Read off a line graph to convert from km to miles. | ***Multiplication and division/Addition or subtraction* Day 1:**  1. Use the grid method to multiply 3-digit numbers by 2-digit numbers.  **Day 2:** 1. Use long multiplication to multiply 3-digit numbers by numbers between 10 and 20.  **Day 3:** 1. Use long multiplication to multiply 3-digit numbers by numbers between 20 and 30.  **Day 4:** 1. Choose how to solve a mix of +, −, × and ÷ mental and written calculations.  **Day 5:** 1. Choose which operations are necessary to solve single-step and multi-step word problems.  **ASSERTIVE MENTORING TARGETS: 5, 3, 6** |