Medium term Plans for Spring Years 4/5 Mixed age Range

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
1	***Number and Place Value*** **Day 1:** Use negative numbers in context of temperature. **Day 2**: Place negative numbers on a line; Order positive and negative numbers. **Day 3:** Divide 2-digit numbers by 10 to create 1-place decimal numbers. **Day 4:** Multiply 1-place decimals to give whole numbers. **Day 5:** Relate fractions to decimals (0.1 ≡ 1/10).	**Day 1:** 1. Use negative numbers in context of temperature. **Day 2:** 1. Place negative numbers on a line. 2. Order positive and negative numbers. **Day 3:** 1. Understand that when we divide by 10, digits shift one place to the right. 2. Understand what each digit represents in a number with one decimal place. **Day 4:** 1. Understand that when we multiply by 10, digits shift one place to the left. 2. Understand what each digit represents in a number with one decimal place. **Day 5:** 1. Recognise decimal and fraction forms of tenths.	***Number and Place Value*** **Day 1:** Use negative numbers in context of temperature; Calculate rises and falls in temperature. **Day 2**: Use negative numbers in the context of temperature; Find differences between temperatures. **Day 3:** Place value in 6-digit numbers (PV + and -, compare numbers). **Day 4:** Add and subtract 1, 10, 100, 1000, 10,000 and 100,000 to/from 6-digit numbers. **Day 5:** Place 6-digit numbers on number lines and round to the nearest 100 or 1000.	**Day 1:** 1. Use negative numbers in context of temperature. 2. Calculate rises and falls in temperature. **Day 2:** 1. Find a difference between a negative temperature and positive temperature. **Day 3:** 1. Say what each digit represents in a 6-digit number. 2. Write place value related additions and subtractions. 3. Compare pairs of 6-digit numbers. **Day 4:** 1. Add and subtract 1, 10, 100, 1000, 10,000 and 100,000 to/from 6-digit numbers. **Day 5:** 1. Place 6-digit numbers on empty number lines. 2. Round 6-digit numbers to the nearest 100 to 1000.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
2	***Addition/subtraction and decimals*** **Day 1:** Add and subtract 0.1 and 1 to/from numbers with one decimal place. **Day 2**: Relate one place decimals to cm and mm. **Day 3:** Multiply and divide by 10 and 100 using 1-place decimals. **Day 4:** Compare 1-place decimal numbers. **Day 5:** Multiply multiples of 10 and 100 by single-digit numbers.	**Day 1:** 1. Add and subtract 0.1 and 1 to/from numbers with one decimal place. **Day 2:** 1. Place one-place decimals on a number line. 2. Round tenths to nearest whole in context of measurement. **Day 3:** 1. Multiply and divide by 10 and 100 (whole answers or with 1dp). **Day 4:** 1. Compare 1-place decimals and write one in between, e.g. 2.1 and 1.2 and say what whole number comes between these two. **Day 5:** 1. Multiply multiples of 10 and 100 by single-digit numbers.	***Addition/subtraction and decimals*** **Day 1:** Place value addition and subtraction of numbers with 2 decimal places. **Day 2**: Round decimals to the nearest whole and tenth. **Day 3:** Multiply and divide by 10, 100 and 1000. **Day 4:** Use place value to add and subtract; add and subtract near multiples of 100 and 1000. **Day 5:** Use counting up (Frog) to subtract four digit-numbers from multiples of 1000.	**Day 1:** 1. Say what each digit represents in a number with 2 decimal places. 2. Use place value to add and subtract. **Day 2:** 1. Round numbers with 2 decimal places to the nearest whole and tenth. **Day 3:** 1. Multiply and divide by 10, 100 and 1000 to give answers with two decimal places. **Day 4:** 1. Use place value to add and subtract. 2. Add and subtract near multiples of 100 and 1000. **Day 5:** 1. Use counting up (Frog) to subtract four digit-numbers from multiples of 1000. 2. Find all possibilities by working systemically.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
3	***Addition and subtraction*** **Day 1:** Add amounts of money using expanded and compact addition. **Day 2**: Add amounts of money using expanded & compact addition. **Day 3:** Count up to solve 3-digit subtractions. **Day 4:** Count up to find change from £5 and £10. **Day 5:** Count up to find a price difference.	**Day 1:** 1. Use compact addition to add amounts of money with one 'carry', e.g. £3.25 + £2.68. 2. Use rounding to estimate the total before carrying out the addition. **Day 2:** 1. Use compact addition to add amounts of money with two 'carries', e.g. £3.45 + £2.68. 2. Use rounding to estimate the total before carrying out the addition **Day 3:** 1. Use counting up to subtract three digit numbers, e.g. 414 – 278. **Day 4:** 1. Find the change from £5 and from £10. **Day 5:** 1. Find a difference between prices, e.g. £4.24 and £3.78.	***Addition and subtraction*** **Day 1:** Use written addition to add decimals; use rounding to estimate totals. **Day 2:** Add decimal numbers. **Day 3:** Subtract pairs of 2-digit numbers with one decimal place. **Day 4:** Use Frog to find change from £100; use column addition to add amounts. **Day 5:** Use Frog to find the difference between amounts of money.	**Day 1:** 1. Add pairs of 3-digit numbers with 1 decimal place, 2 decimals places or both. 2. Use rounding to make an estimate. **Day 2:** 1. Add pairs of 4-digit numbers with 2 decimal places. 2. Use rounding to make an estimate. **Day 3:** 1. Subtract pairs of 2-digit numbers with one decimal place, choosing to count back or count up (Frog) **Day 4:** 1. Use Frog to find change from £100. 2. Use column addition to add amounts of money. **Day 5:** 1. Use Frog to find the difference between amounts of money. 2. Estimate differences.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
4	***Measures and data*** **Day 1:** Use x, y co-ordinates on a graph (first quadrant). **Day 2**: Use x, y co-ordinates to draw and translate shapes in first quadrant. **Day 3:** Tell the time using analogue, 12-hour & 24-hourclocks. **Day 4:** Convert 24 hour clock to am and pm times. **Day 5:** Use timetables and calculate intervals.	**Day 1:** 1. Plot and write co-ordinates in the first quadrant. 2. Complete polygons by giving missing points. **Day 2:** 1. Describe translations of shapes on a grid and write new co-ordinates. **Day 3:** 1. Tell the time on an analogue clock using am and pm. 2. Begin to use 24-hour clock and recognise matching times. **Day 4:** 1. Convert analogue times into digital. 2. Convert 24-hour times into 12-hour am/pm times. **Day 5:** 1. Calculate time intervals using 24-hour clock, crossing the hour. 2. Read and work out time intervals on a 24-hour timetable.	***Measures and data*** **Day 1:** Plot points and draw polygons in two quadrants. **Day 2:** Work out new co-ordinates after a translation. **Day 3:** Reflect a shape, write new co-ordinates. **Day 4:** Draw line graphs of times tables. **Day 5:** Draw a conversion graph of imperial to metric units; use it to read off equivalent measures.	**Day 1:** 1. Plot points in two quadrants. 2. Draw polygons and identify the co-ordinates of their vertices. **Day 2:** 1. Translate polygons on a grid in one direction. 2. Begin to predict the new co-ordinates after a translation in one direction. **Day 3:** 1. Reflect polygons in the y-axis. 2. Begin to predict the new co-ordinates after a reflection in the y-axis. **Day 4:** 1. Draw line graphs of times tables and read off intermediate values. 2. Revise the times tables. **Day 5:** 1. Draw conversion graphs and read off intermediate values. 2. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
5	***Place Value/Addition and subtraction*** **Day 1:** Add three 2-digit numbers using compact addition. **Day 2**: Add four 2-digit numbers using compact addition. **Day 3:** Subtract 3-digit numbers using expanded column subtraction. **Day 4:** Subtract 3-digit numbers choosing an efficient method. **Day 5:** Investigate patterns when subtracting 3-digit numbers.	**Day 1:** 1. Use compact addition to add three 2-digit numbers 2. Use rounding to estimate totals. **Day 2:** 1. Use compact addition to add four 2-digit numbers. 2. Use rounding to estimate totals. **Day 3:** 1. Use expanded decomposition to subtract pairs of 3-digit numbers (two carries'). 2. Check subtraction with addition**.** **Day 4:** 1. Use expanded decomposition to subtract pairs of 3-digit numbers (two carries'). 2. Choose counting up or decomposition to solve subtractions. **Day 5:** 1. Subtract any pair of 3-digit numbers using written or mental method. 2. Identify and describe patterns; test out ideas.	***Place Value/Addition and subtraction*** **Day 1:** Multiply and divide by 10, 100 and 1000. **Day 2:** Place numbers with two decimal places on a line, round to the nearest tenth or whole. **Day 3:** Use Frog (counting up) to subtract pairs of numbers with same number of decimal places. **Day 4:** Use Frog (counting up) to subtract pairs of numbers with different numbers of decimal places, e.g. 3.2 – 1.78 and 5.34 – 3.7. **Day 5:** Use counting up to find change and differences between prices; Solve subtraction word problems.	**Day 1:** 1. Multiply and divide by 10, 100 and 1000 (answers with 2 or fewer decimal places). **Day 2:** 1. Place numbers with two decimal places on an empty line, round to the nearest tenth or whole. **Day 3:** 1. Use Frog (counting up) to subtract pairs of numbers with the same number of decimal places. **Day 4:** 1. Use Frog (counting up) to subtract pairs of numbers with different numbers of decimal places, e.g. 3.2 – 1.78 and 5.34 – 3.7. **Day 5:** 1. Solve single and two-step word problems involving subtraction. 2. Choose an appropriate strategy to solve subtraction.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
6	***Multiplication and division*** **Day 1:** Know multiplication and division facts for the 9 times table. **Day 2**: Begin to know multiplication and division facts for the 7 times table. **Day 3:** Revise times tables up to 12 × 12. **Day 4:** Use tables facts and place value to multiply multiples of 10 and 100 by single-digit numbers. **Day 5:** Find factors of numbers up to 40.	**Day 1:** 1. Know multiplication and division facts for the 9 times table. **Day 2:** 1. Begin to know multiplication and division facts for the 7 times table. 2. Use commutativity and known facts to derive new multiplication facts. **Day 3:** 1. Know most multiplication facts up to 12 and use commutativity and known facts to derive others. **Day 4:** 1. Multiply single-digit numbers by multiples of 10 and 100. **Day 5:** 1. Find factors of numbers up to 40.	***Multiplication and division*** **Day 1:** Find lowest common multiples and highest common factors. **Day 2:** Use mental strategies (factors and multiples) to multiply by 5, 20, 6, 4 and 8. **Day 3:** Use mental strategies to ÷ by 5, 20, 6, 4 and 8. **Day 4:** Use short multiplication to multiply 4-digit numbers by 1-digit numbers; Use rounding to approximate. **Day 5:** Use short multiplication to multiply 4-digit numbers by 1-digit numbers; Use commutativity of ×.	**Day 1:** 1. Find the highest common factor of three 2-digit numbers. 2. Find the lowest common multiple of at least 3 single-digit numbers. **Day 2:** 1. Use mental strategies to multiply two and 3-digit numbers by 5, 20, 6, 4 and 8. 2. Use knowledge of factors and multiples in mental multiplication. **Day 3:** 1. Use mental strategies to divide numbers by 5, 20, 6, 4 and 8. 2. Use knowledge of factors and multiples in mental multiplication. **Day 4:** 1. Use short multiplication to multiply 4-digit numbers by 1-digit numbers including amounts of money. 2. Use rounding to approximate. 3. Understand that multiplication is commutative. **Day 5:** 1. Use short multiplication to multiply 4-digit numbers by 1-digit numbers. 2. Use rounding to approximate. 3. Understand that multiplication is commutative.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
7	***Fractions and decimals*** **Day 1:** Identify equivalent fractions, especially in relation to halves and quarters. **Day 2**: Simplify fractions by writing in their simplest form. **Day 3:** Identify equivalent fractions and mark on a number line. **Day 4:** Add and subtract fractions with the same denominator. **Day 5:** Mark equivalent fractions/decimals on a number line.	**Day 1:** 1. Identify fractions equivalent to one half including quarters and eighths. 2. Identify fractions equivalent to one quarter. **Day 2:** 1. Identify equivalent fractions up to twelfths with a supporting image. 2. Reduce fractions to their simplest form. **Day 3:** 1. Identify equivalent fifths, tenths and halves and mark them on a line. 2. Reduce fractions to their simplest form. **Day 4:** 1. Add and subtract fractions with the same denominators with 2 wholes using a fraction line. **Day 5:** 1. Identify equivalent fractions and decimals (0.1s, 1/10s and 1/2s).	***Fractions and decimals*** **Day 1:** Revise comparing fractions with related denominators using equivalence. **Day 2:** Use mental division to find unit fractions of amounts. **Day 3:** Find non-unit fractions of amounts. **Day 4:** Find fractions, multiply and divide to solve word problems. **Day 5:** Know decimal equivalents for halves, quarters, fifths, tenths and hundredths. .	**Day 1:** 1. Compare and order fractions with related denominators. **Day 2:** 1. Use mental division strategies to find unit fractions of amounts. **Day 3:** 1. Find non-unit fractions of amounts. **Day 4:** 1. Find fractions, multiply and divide to solve word problems. **Day 5:** 1. Know decimal equivalents for halves, quarters, fifths, tenths and hundredths. 2. Use equivalence to order a mixed set of decimals and fractions.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
8	***Addition/subtraction, Multiplication and division*** **Day 1:** Add/subtract single-digit numbers to and from three and 4-digit numbers. **Day 2**: Subtract single-digit numbers from 3- and 4-digit numbers. **Day 3:** Add multiples of 10, 100 and 1000. **Day 4:** Subtract multiples of 10, 100 and 1000. **Day 5:** Add and subtract multiples of 10, 100 and 1000.	**Day 1:** 1. Add single-digit numbers to 4-digit numbers, bridging multiples of 10, 100 and 1000. **Day 2:** 1. Subtract single-digit numbers from 4-digit numbers, bridging multiples of 10, 100 and 1000. **Day 3:** 1. Add multiples of 10, 100 and 1000 to 4-digit numbers, crossing 10s, 100s but not crossing 10,000. **Day 4:** 1. Subtract multiples of 10, 100 and 1000 from 4-digit numbers, crossing 10s and 100s. **Day 5:** 1. Understand inverse operations, how subtraction 'undoes' addition for example.	***Addition/subtraction, Multiplication and division*** **Day 1:** Use short division to divide 3-digit numbers by single-digit numbers. **Day 2:** Use short division to divide 3-digit numbers by single-digit numbers including where the first digit is less than the divisor. **Day 3:** Use short division to divide 3-digit numbers by single-digit numbers; divide any remainders to give fractions. **Day 4:** Multiply unit fractions by whole numbers. **Day 5:** Multiply non-unit fractions by whole numbers. .	**Day 1:** 1. Use short division to divide 3-digit numbers by single-digit numbers. **Day 2:** 1. Use short division to divide 3-digit numbers by single-digit numbers including where the first digit is less than the divisor. **Day 3:** 1. Use short division to divide 3-digit numbers by single-digit numbers including where the first digit is less than the divisor. 2. Divide any remainders to give fractions. **Day 4:** 1. Multiply unit fractions by whole numbers, writing any improper fractions as mixed numbers. **Day 5:** 1. Multiply non-unit fractions by whole numbers, writing any improper fractions as mixed numbers.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
9	***Measures and data*** **Day 1:** Measure in m and cm; convert from centimetres to metres, and metres to centimetres. **Day 2**: Measure in cm/mm; convert from mm to cm. **Day 3:** Weigh in kg/g; convert from kg to g & vice versa. **Day 4:** Estimate weights and order items by weight; display information on a bar graph. **Day 5:** Measure weights or lengths using SI units; display results on a bar graph.	**Day 1:** 1. Measure lengths in m and cm and record using a decimal point. 2. Convert cm into m. **Day 2:** 1. Measure lengths in cm and mm to one decimal place. 2. Convert lengths from km to m and mm to cm**.** **Day 3:** 1. Use weight benchmarks to assist with estimating. 2. Weigh items in g and kg to the nearest 100g. 3. Convert from kg to g and from g to kg. **Day 4:** 1. Estimate the order of weights. 2. Read scales to one decimal place. 3. Record results in a bar graph. **Day 5:** 1. Choose appropriate units of measurement to measure objects. 2. Collect, record and interpret data in a bar graph, choosing a suitable scale.	***Measures and data*** **Day 1:** Find the perimeters of rectangles and composite shapes. **Day 2:** Work out the missing lengths of sides in order to find perimeters. **Day 3:** Find areas of squares & rectangles in cm^2 /m^2. **Day 4:** Estimate area of irregular shapes; calculate the area from scale drawings. **Day 5:** Find and estimate volumes.	**Day 1:** 1. Find the perimeters of rectangles and composite shapes. **Day 2:** 1. Work out the missing lengths of sides in order to find perimeters. **Day 3:** 1. Find the area of rectangles including squares by multiplying the lengths of two adjacent sides together. **Day 4:** 1. Estimate then count to find the area of irregular shapes. 2. Calculate the area from scale drawings. **Day 5:** 1. Estimate and find the volume of shapes by making it with cm cubes.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
10	***Place Value/ Addition or subtraction*** **Day 1:** Add three 3-digit numbers using compact addition. **Day 2**: Use compact addition to add amounts of money. **Day 3:** Use expanded decomposition to subtract 3-digit numbers. **Day 4:** Introduce compact decomposition to subtract 3-digit numbers. **Day 5:** Use compact decomposition to subtract 3-digit numbers.	**Day 1:** 1. Use compact addition to add three 3-digit numbers. 2. Approximate the answer first. **Day 2:** 1. Use compact addition to add amounts of money. 2. Approximate the answer first. **Day 3:** 1. Subtract pairs of 3-digit numbers using expanded decomposition (one 'carry'). **Day 4:** 1. Subtract pairs of 3-digit numbers using expanded or compact decomposition (one 'carry'). **Day 5:** 1. Subtract any pair of 3-digit numbers using expanded or compact decomposition (two 'carries').	***Place Value/ Addition or subtraction*** **Day 1:** Use place value to add and subtract to/from 6-digit numbers. **Day 2:** Compare 6-digit numbers and round to the nearest 10, 100, 1000, 10,000 and 100,000. **Day 3:** Use decomposition to subtract pairs of 5-digit numbers. **Day 4:** Use decomposition to subtract pairs of 5-digit numbers. **Day 5:** Use decomposition to subtract pairs of 5-digit numbers and 4-digit numbers from 5-digit numbers; solve word problems.	**Day 1:** 1. Use place value to add and subtract to/from 6-digit numbers. **Day 2:** 1. Compare 6-digit numbers. 2. Round 6-digit numbers to the nearest 10, 100, 1000, 10,000 and 100,000. **Day 3:** 1. Use decomposition to subtract pairs of 5-digit numbers. **Day 4:** 1. Use decomposition to subtract pairs of 5-digit numbers including where there is a zero in the first number. **Day 5:** 1. Use decomposition to subtract pairs of 5-digit numbers and 4-digit numbers from 5-digit numbers. 2. Solve word problems.

Week	Y4: Main focus of teaching/activities	Outcomes	Y5: Main focus of teaching/activities	Outcomes
11	***Addition and subtraction/ Multiplication and division*** **Day 1:** Know the 11 and 12 times tables. **Day 2**: Use partitioning to multiply 3-digit numbers by 1-digit numbers. **Day 3:** Use partitioning to multiply 3-digit numbers by 1-digit numbers. **Day 4:** Use partitioning to multiply 3-digit numbers by 1-digit numbers. **Day 5:** Divide 2-digit numbers by single-digit numbers (with remainders).	**Day 1:** 1. Know the 11 and 12 times tables. **Day 2:** 1. Use the grid method to multiply 3-digit numbers by single-digit numbers. **Day 3:** 1. Use partitioning to multiply 3-digit numbers by single-digit numbers (grid or ladder layout). **Day 4:** 1. Use partitioning to multiply 3-digit numbers by single-digit numbers (grid or ladder layout). 2. Use rounding to approximate an answer. **Day 5:** 1. Divide 2-digit numbers by single-digit numbers, including those divisions which give a remainder (answers between 10 and 30).	***Addition and subtraction/ Multiplication and division*** **Day 1:** Use place value to add and subtract; add and subtract near multiples of 100, 1000 and 10,000. **Day 2:** Column addition of 4-digit and 5-digit numbers. **Day 3:** Revise column addition and subtraction of 4-digit and 5-digit numbers. **Day 4:** Use short multiplication to multiply 4-digit numbers (including amounts of money) by single-digit numbers. **Day 5:** Use short division to divide 4-digit numbers by single-digit numbers.	**Day 1:** 1. Use place value to add and subtract to and from 5-digit numbers. 2. Add and subtract near multiples of 100, 1000 and 10,000. **Day 2:** 1. Use column addition to add pairs of 5-digit numbers, three 4-digit numbers, and 4-digit numbers to 5-digit numbers. **Day 3:** 1. Add and subtract pairs of 5-digit numbers. 2. Make and test predictions, generate rules. **Day 4:** 1. Use short multiplication to multiply 4-digit numbers (including amounts of money) by single-digit numbers. **Day 5:** 1. Use short division to divide 4-digit numbers by single-digit numbers.

Title of topic – colour code (see below)

GREEN – Place Value or number
ORANGE – Addition or subtraction
PURPLE – Multiplication or division (inc. scaling or square/cube numbers or multiples and factors...)
GREY – Fractions or decimals or percentages or ratio
BLUE – shape or measures or data
BROWN – Algebra

The Hamilton plans do provide resources for practice of the relevant algorithms, skills and the reinforcement of crucial understandings. However, some teachers may prefer to use textbooks as an additional source of practice. We have agreed with Pearson,

the publisher of Abacus, that we can reference the Abacus textbooks and that they will do a special deal if any Hamilton users wish to purchase a set of these textbooks. These are new books, written specifically to match the new National Curriculum. Any schools wishing to follow this up should go to this webpage:
http://www.pearsonschoolsandfecolleges.co.uk/Primary/GlobalPages/AbacusFriendsofHamiltonTrust/SpecialOfferforFriendsofHamiltonTrust.aspx