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|  | Term One | Term Two | Term Three |
| N  U  M  B  E  R | Count forwards and backwards in 1s, 2s, 5s and 10s within 9999.  Recognise spoken numbers within 9999.  Read numbers within 9999.  Write numbers within 9999.  Know number “after” within 9999.  Know number “before” within 9999.  Know number “between” within 9999.  Find missing numbers in a sequence (increasing and decreasing) within 9999.  Recognise spoken fractions  Read fractions, identifying numerator and denominator.  Write fractions, identifying numerator and denominator.  Know near doubles within 20.  Know components of 20.  Know all remaining addition facts within 20:  (7+ 4,5 ; 8+ 3,4,5,6 ; 12 + 3,4,5,6,7 ; 13+ 3,4,5,6 ;  14 + 3,4,5 ; 15 + 3,4, 16+ 3)  Mentally add 3 single digit numbers.  Mentally find doubles of multiples of 10 up to double 100, and corresponding halves.  Mentally find doubles of multiples of 100 up to double 500, and corresponding halves.  Mentally find doubles of multiples of 5 up to double 95, and corresponding halves  Mentally find what must be added to any 2 digit number to make 100  Use knowledge of place value to develop a standard written method for vertical subtraction HTU (with exchange: decomposition), estimating the answer before calculating.  Mentally subtract any number from 20, including bridging through 10.  Know all remaining subtraction facts within 20.  Solve a range of addition and subtraction problems, using both written and mental calculations, selecting the operation required.  N  U  M  B  E  R  Understand the 3 times multiplication facts as repeated addition, and as arrays. Develop quick recall, using understanding of commutativity.  Understand the 4 times multiplication facts as repeated addition, and as arrays. Develop quick recall, using understanding of commutativity.  Derive corresponding division facts, using understanding of inverse relationship.  Using knowledge of 2,3,4, 5 and 10 times multiplication facts, derive corresponding division facts, using understanding of inverse relationship.  Solve a range of multiplication and division problems, using known facts, selecting the operation required.  From 3 given numbers, derive 2 multiplication and 2 division facts.  Use one operation function machines to reinforce quick recall of addition, subtraction, multiplication and division facts.  N  U  M  B  E  R  Understand relationships between all coins and notes.  Understand and use decimal recording of amounts of money up to £100  Calculate change required when buying items, paying with amounts up to £100  Use efficient methods to find the total of a mixed group of coins and notes totals up to £10.00 (e.g. by starting with the highest value coins or notes, or by grouping lower value coins into £1 piles). | Count forwards and backwards in halves and quarters.  Order a set of consecutive numbers (increasing and decreasing) within 9999.  Order a set of non-consecutive numbers (increasing and decreasing) within 9999.  Demonstrate value of any number within 9999 in terms of thousands, hundreds, tens and ones (units).  Understand the use of 0 as a place holder.  Round numbers within 9999 to the nearest 1000, nearest 100 and nearest 10.  Order a set of fractions (increasing and decreasing).  Develop a standard written method for vertical addition Th H T U (no carrying, then with carrying), estimating the answer before calculating.  Mentally add 100 to multiples of 100 within 1000.  Mentally add multiples of 100 to multiples of 100 within 1000.  Mentally find what must be added to multiples 100 to make 1000.  Mentally add a single digit to a 2 digit number, bridging the 10.  (34+7, 43-8)  Mentally add two 2 digit numbers within 100, without bridging 10.  Develop a standard written method for vertical subtraction Th H T U (no exchange, then with exchange), estimating the answer before calculating.  Mentally subtract 100 from multiples of 100 within 1000.  Mentally subtract multiples of 100 from multiples of 100 within 1000.  Mentally subtract a single digit from a 2 digit number, bridging the 10. (34-7, 43-8)  Mentally subtract two 2 digit numbers within 100 , without bridging 10.  Solve a range of addition and subtraction problems, using both written and mental calculations, selecting the operation required.  Understand the 8 times multiplication facts as repeated addition, and as arrays. Develop quick recall, using understanding of commutativity, and knowledge of 4 times facts. Derive corresponding division facts, using understanding of inverse relationship.  Multiply any whole number by 10, answers within 9999, using concept that digits move one place to the left, as the value of each digit becomes 10 times larger.  Use written multiplication methods to multiply a 2 digit number by 2, 3, 4, 5.  Divide any multiple of 10 within 9999 by 10, using concept that digits move one place to the right, as the value of each digit becomes 10 times smaller.  Using knowledge of 8 times multiplication facts, derive corresponding division facts, using understanding of inverse relationship.  Develop a written method for division calculation within 99.  Solve a range of multiplication and division problems, using both written and mental methods, selecting the operation required.  Use two operation function machines to reinforce quick recall of addition, subtraction, multiplication and division facts.  Find different ways of paying exact amounts within £10.00, e.g. using the least number of coins or notes, or using a specific number of coins or notes.  Calculate in the context of money, using all 4 operations- e.g. working out the cost of a meal for 4 people, then splitting the total cost equally between them. | Count forwards and backwards in multiples of 3,4,5,6,7,8,9, within 100.  Understand equivalence of fractions, where the numerator is 1 (e.g. find fractions which are equivalent to 1/5).  Find fractions of quantities (numerator = 1), using links with division facts.  Find what must be added to any 3 digit number to make the next higher multiple of 10 or 100.  Mentally add 100 to numbers within 1000.  Mentally add multiples of 100 to numbers within 1000.  Find doubles of multiples of 50, answers within 1000, and derive corresponding halves.  Find doubles of multiples of 10 up to double 200 and derive corresponding halves.  Mentally find what must be subtracted from any 3 digit number to make the next lower multiple of 10 or 100.  Mentally subtract 100 from numbers within 1000.  Mentally subtract multiples of 100 from numbers within 1000.  Solve a range of addition and subtraction problems, using both written and mental calculations, selecting the operation required.  Understand the 6. 7 and 9 times multiplication facts as repeated addition, and as arrays. Develop quick recall, using understanding of commutativity, and knowledge of other multiplication facts. Derive corresponding division facts, using understanding of inverse relationship.  Use written multiplication methods to multiply a 2 or 3 digit number by any single digit number.  Using knowledge of 6, 7 and 9 times multiplication facts, derive corresponding division facts, using understanding of inverse relationship.  Develop a written method for division calculation within 999.  Solve a range of multiplication and division problems, using both written and mental methods, selecting the operation required.  Use known division facts to find fractions of quantities (numerator = 1)  Calculate the input when the operation and output of function machines are given.  Calculate the operation when the input and output of function machines are given.  Compare different ways of spending a fixed budget up to £100.00.  Calculate estimated costs by rounding prices to the nearest pound, 50p or 10p as appropriate.  Discuss ways of managing money effectively: e.g. deciding on best value when considering different options, putting money into a savings account etc.  Investigate different currencies, including Euro, and find rough equivalent sterling values. |
| PROCESSES | Begin to organise own work and work systematically. Solve simple two-stage problems set in real life contexts. Begin to suggest how to present findings. Use a writing frame to plan what is needed to start solving a problem. Talk about how they carried out a task. Discuss and respond to open-ended questions. Discuss and compare ideas and methods with others. Where appropriate, select or design a writing frame to plan work. Explain their thinking. Compare own methods/findings/presentation with that of others. Begin to explore and use a range of problem solving strategies, persevering when difficulties are encountered. Check accuracy of own results and findings. | | |
|  | Term One | Term Two | Term Three |
| M  E  A  S  U  R  E  S | Estimate, measure and record lengths in cm and/ or m and cm,  converting between cm and m & cm e.g. 320 cm is equal to 3m and 20cm.  Understand concept of perimeter.  Estimate, measure and record weights using kg and g  Estimate, measure and record weights using litres and millilitres.  Understand that a square cm is a square where each side is 1cm in length, and that it has an area of 1 square cm.  Estimate and measure areas using the square cm as a standard unit, by counting squares, where the area:   * Is an exact number of complete cm squares. * Is made up of whole and half cm squares.   Record using written and index notation (i.e. square cm and cm2 ).  Using analogue and digital clock times to 5 minutes, calculate what time it **will be**, or **was** using different intervals, (hours, half hours, quarter hours, multiples of 10 and 5 mins); e.g. The clock says 9.25. What time was it 20 minutes ago? What time will it be in 15 mins?  Know the number of days in each month and use to calculate durations across a month. | Know which unit of length to use in different situations.  Choose appropriate measuring tool, explaining reasons for choice.  Find perimeter of simple shapes, by finding total of lengths of sides.  Choose appropriate unit of weight, and measuring device, in different situations, explaining reasons for choice.  Choose appropriate unit of capacity, and measuring container, in different situations, explaining reasons for choice.  Estimate and measure irregular areas in cm2 by counting whole, half and part squares.  Read analogue and digital times to 1 minute intervals.  Calculate start, finish, durations to 1 minute intervals, including counting through the hour.  Apply knowledge of calculating start, finish, durations to interpreting timetables.  Appreciate need for a more accurate measure of time than 1 minute.  Understand and use seconds to measure time durations more accurately using digital and analogue timers.  Estimate short durations using seconds through practical activities.  Understand the concept and language of temperature. | Estimate, measure and record short lengths in mm.  Discuss how to measure lengths more accurately – use cm and mm.  Appreciate and use relationship between mm and cm to convert between mm and cm and mm e.g. 32mm is equal to 3cm and 2mm.  Find more efficient methods to calculate perimeter of shapes, e.g. find perimeter of rectangle by adding 2 lengths, then doubling.  Know and use gram equivalents of 1 kg, ½ kg, ¼ kg, ¾ kg and 1/10 kg.  Know and use millilitre equivalents of 1 l, ½ l, ¼ l, ¾ l and 1/10 l.  Find more efficient methods for finding the area of squares and rectangles, e.g. count how many squares are in 1 row (or column), and multiply by the number of rows (or columns).  Use relationship between hours and minutes when calculating (e.g. start time 10.24 am, finish time 12.12pm, find duration in hours and minutes).  Know there are 60 seconds in 1 minute and use to convert time durations between seconds and minutes & seconds.  Understand patterns within calendar dates, link with 7 times multiplication facts.  Use a thermometer to measure temperature in oC, and to calculate temperature increases and decreases (positive values only). |
|  | Term One | Term Two | Term Three |
| S S  H P  A & A  P C  E E | Identify 3D shapes from 2D drawings.  Sort, name, recognise and describe 2D shapes, using number and length of sides, number of corners, number of right- angles, number of lines of symmetry, stating whether they are regular or irregular.  Understand that coordinates can be used to identify a point rather than a whole square.  Identify angles as being an amount of turn smaller or larger than one right angle.  Use terms “acute” and “obtuse” to categorise angles. | Investigate nets of cubes and cuboids by opening up boxes.  Reflect a shape or design using one line of symmetry (horizontal, vertical or diagonal).  Sort, name, recognise and describe 3D shapes, using number of faces, number and length of edges, number of vertices.  Use numerical coordinates to plot positions (first quadrant only).  Understand that left and right, clockwise and anticlockwise are relative terms.  Use N, S, E, W as absolute directions. | Match nets with a range of 3 D shapes.  Draw nets and use to construct a range of 3D shapes.  Identify the numerical coordinates of given points (first quadrant only).  Calculate direction and amount of turn using simple maps. (e.g You are at the post office, facing east, and turn 1 right angle clockwise. What direction are you now facing? What can you see in front of you?  Understand need for a standard unit of turn, smaller than a right angle. |
| H  A  N D  D A  L T  I A  N  G | Use ICT software to represent data in a variety of ways and decide which is the most appropriate, giving reasons for choice.  Interpret pie charts using halves, quarters, thirds, fifths to work out proportions and quantities of a total. | Represent data by constructing and interpreting pictograms where the symbol represents a group of objects, and half of the symbol represents half of the group size ( e.g. if a symbol shows a group of 10, discuss how 25 could be shown).  Design and use a data collection sheet to investigate an identified issue, and evaluate its effectiveness. | Insert relevant information into a computer database with fields already created.  Use sort and search functions to answer questions with up to 2 criteria.  Discuss the likelihood of particular events occurring, using terms “impossible”, “unlikely” , “likely” , “ certain”. |