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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 500.  Recognise spoken numbers within 500.  Read numbers within 500.  Write numbers within 500.  Know number “after” within 500.  Know number “before” within 500.  Know number “between” within 500.  Find missing numbers in a sequence (increasing and decreasing) within 500.  Order a set of consecutive numbers (increasing and decreasing) within 500.  Order a set of non-consecutive numbers (increasing and decreasing) within 500.  Demonstrate value of any number within 500 in terms of hundreds, tens and ones (units) using Base 10 materials.  Understand 0 as a place holder.  Round numbers within 100 to the nearest 10.  Understand concept of fractions (halves and quarters) through practical activities.  Use knowledge of place value to develop a practical method for vertical addition TU (with carrying).  Develop a standard written method for vertical addition TU (with carrying), estimating the answer before calculating.  Mentally add 1, 2 or 0 to a number, answers within 100.  Add 10 to any number using the 100 grid, using and explaining number patterns.  Add a multiple of 10 to a multiple of 10 using the 100 grid, using and explaining number patterns.  Add a multiple of 10 to any number using the 100 grid, using and explaining number patterns.  Mentally add 10 to any number, answers within 100, using and explaining number patterns  Mentally add a multiple of 10 to a multiple of 10, answers within 100, using and explaining number patterns.  Mentally add a multiple of 10 to any number, answers within 100, using and explaining number patterns.  Mentally subtract 1, 2 or 0 from a number, answers within 100.  Subtract 10 from any number using the 100 grid, using and explaining number patterns.  Subtract a multiple of 10 from a multiple of 10 using the 100 grid, using and explaining number patterns.  Subtract a multiple of 10 from any number using the 100 grid, using and explaining number patterns.  N  U  M  B  E  R  Mentally subtract 10 from any number, answers within 100, using and explaining number patterns  Mentally subtract a multiple of 10 from a multiple of 10, answers within 100, using and explaining number patterns.  Mentally subtract a multiple of 10 from any number, answers within 100, using and explaining number patterns.  Mentally subtract a single digit from a single digit  using both counting back and counting on (difference).  Know all single digit subtraction facts with quick recall.  Understand that addition and subtraction are inverse operations, use to check answers and use complementary addition to solve a subtraction calculation.  From 3 given numbers within 10, give 2 addition and 2 subtraction facts  Mentally subtract a single digit from 20 using both counting back, counting on (difference) and knowledge of equivalent subtraction from 10.  Solve a range of addition and subtraction problems, using both written and mental calculations, selecting the operation required.  Understand the 2 times multiplication facts as repeated addition, and as arrays, and develop quick recall.  Understand that multiplication is commutative.      N  U  M  B  E  R  Understand and use decimal recording of amounts of money up to £1.00  Calculate change required when buying items, paying with amounts up to £1.00.  Use efficient methods to find the total of a mixed group of coins totals up to £1.00 (e.g. by starting with the highest value coins, or by grouping lower value coins into 10p piles).  Understand relationships between coins up to £1.00. | Count forwards and backwards in 1s, 2s, 5s and 10s within 999.  Recognise spoken numbers within 999.  Read numbers within 999.  Write numbers within 999.  Know number “after” within 999.  Know number “before” within 999.  Know number “between” within 999.  Find missing numbers in a sequence (increasing and decreasing) within 999.  Extend understanding to include wider range of fractions, using both whole shapes and sets of objects.  Understand fraction notation (numerator and denominator).  Know what must be added to a number to make 20.  Mentally add a single digit to a teens number without bridging.  Mentally add a single digit to any 2 digit number without bridging.  Mentally add two single digit numbers, bridging 10.  Mentally find what must be added to a multiple of 10 to make 100.  Mentally add a single digit to any 2 digit number, without bridging 10.  Mentally find what must be added to any 2 digit number to make the next multiple of 10.  Add 11 to any number using 100 square.  Mentally add 11 to any number, answers within 100.  Add 21, 31, 41 etc to any number using 100 square  Mentally add 21, 31, 41 etc to any number, answers within 100.  Use knowledge of place value to develop a practical method for vertical subtraction TU with exchange (decomposition).  Develop a standard written method for vertical subtraction TU with exchange (decomposition), estimating the answer before calculating.  Mentally find what must be subtracted from any 2 digit number to make the previous multiple of 10.  Know that subtracting a number from itself gives 0.  Know that subtracting adjacent numbers gives 1  Know that subtracting adjacent but one numbers gives 2  Know all remaining single digit subtraction facts within 10.  Mentally subtract a single digit from a teens number without bridging.  Mentally subtract a single digit from any 2 digit number without bridging.  Subtract 11 from any number using 100 square.  Mentally subtract 11 from any number, answers within 100.  Subtract 21, 31, 41 etc from any number using 100 square.  Mentally subtract 21, 31, 41 etc from any number, answers within 100.  From 3 given numbers within 20, give 2 addition facts and 2 subtraction facts.  Solve a range of addition and subtraction problems, using both written and mental calculations, selecting the operation required.  Understand the 10 times multiplication facts as repeated addition, and as arrays. Develop quick recall, using understanding of commutativity.  Understand the 5 times multiplication facts as repeated addition, and as arrays. Develop quick recall, using understanding of commutativity.  Know half of all even numbers to 10.  Know half of all even numbers to 20.  Know half of 50, 100.  Find different ways of paying exact amounts within £1.00, e.g. using the least number of coins, or using a specific number of coins.  Understand and use decimal recording of amounts of money up to £1.00  Calculate in the context of money, using addition, subtraction and multiplication with amounts up to £10.00- e.g. finding the total cost of sweets chosen by 3 people, then the change required from £10.00, including using knowledge that 100p = £1.  e.g. 74p + 45p = 119p = £1.19 | Order a set of consecutive numbers (increasing and decreasing) within 999.  Order a set of non-consecutive numbers (increasing and decreasing) within 999.  Demonstrate value of any number within 999 in terms of hundreds, tens and ones (units) using Base 10 materials.  Round numbers within 999 to the nearest 100 and to the nearest 10.  Understand links between fractions of a set and division. (e.g. finding how many objects make “half” of a total set is equivalent to dividing the total number by 2).  Use knowledge of place value to develop a practical method for vertical addition HTU (no carrying).  Develop a standard written method for vertical addition HTU (no carrying).  Use knowledge of place value to develop a practical method for vertical addition HTU (with carrying).  Develop a standard written method for vertical addition HTU (with carrying).  Add 9 to any number using 100 square.  Mentally add 9 to any number, answers within 100.  Add 19, 29, 39 etc to any number using 100 square  Mentally add 19, 29, 39 etc to any number, answers within 100.  Know doubles of multiples of 10 up to double 50.  Use knowledge of place value to develop a  standard written method for vertical subtraction HTU (no exchange), estimating the answer before calculating.  Subtract 9 from any number using 100 square.  Mentally subtract 9 from any number, answers within 100.  Subtract 19, 29, 39 etc from any number using 100 square  Mentally subtract 19, 29, 39 etc from any number, answers within 100.  From 3 given numbers within 50, give 2 addition facts and 2 subtraction facts.  Solve a range of addition and subtraction problems, using both written and mental calculations, selecting the operation required.  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, and links with 2 times facts already known.  Know with quick recall multiplication facts for 2, 5, 10, 3, 4 and apply in problem-solving situations.  Understand sharing and grouping concepts of division through practical activities.  Appreciate that multiplication and division are inverse operations.  Deduce relevant division facts from 2 times multiplication facts.  Understand that finding “half” of a total is equivalent to dividing that total by 2.  Compare different ways of spending a fixed budget up to £10.00.  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. |
| PROCESSES | Select appropriate materials and equipment for a task through an understanding of their special characteristics. Choose and use appropriate number operations and ways of calculating in a wide range of contexts. Suggest the information needed to carry out a task, how to obtain the information and ways to record it.  Ask questions to clarify information. Discuss and respond to open-ended questions. Present findings in an appropriate way. Begin to talk about how they carried out a task. Review own way of working with (teacher/peers). Consider alternative ways of working (with teacher/peers). Check accuracy of own work (with teacher/peers). | | |
|  | Term One | Term Two | Term Three |
| M  E  A  S  U  R  E  S | Develop an appreciation of the length of 1 metre.  Estimate and measure using the metre as a standard unit., using “benchmarks” to help estimation, e.g. the door handle is approximately 1m above the floor.  Approximate measurements appropriately. (e.g. if an object is not exactly 1 m long, choose the most appropriate way of recording the measurement : e.g. less than 1m, just under 1m, just over 1m, almost 1m, 1 m and a bit, more than 1 m but less than 2m, between 1m and 2m, etc)  Develop an appreciation of the weight of 1 kilogram.  Estimate and measure using the kilogram as a standard unit., using “benchmarks” to help estimation, e.g. a bag of sugar or a litre of water weighs 1 kg.  Approximate measurements appropriately. (e.g. if an object is not exactly 1kg in weight, choose the most appropriate way of recording the measurement : e.g. less than 1kg, just under 1kg, just over 1kg, almost 1kg, 1 kg and a bit, more than 1 kg but less than 2kg, between 1kg and 2kg, etc)  Develop an appreciation of the capacity of 1 litre.  Estimate and measure using the litre as a standard unit., using “benchmarks” to help estimation, e.g. a 1 litre milk or juice carton, a 2 litre lemonade bottle.  Approximate measurements appropriately. (e.g. if a container does not hold not exactly 1 litre, choose the most appropriate way of recording the measurement : e.g. less than 1 litre, just under 1 litre, just over 1 litre, almost 1 litre, 1 litre and a bit, more than 1 litre but less than 2 litres, between 1 litre and 2 litres etc).  Work systematically to measure area using different  units to cover the same area, same unit to cover different areas.  Understand why it is important that no gaps are left when covering areas.  Understand use of am and pm.  Know there are 24 hours in one day, am=12 hours and pm = 12 hours.  M  E  A  S  U  R  E  S  Know there are 60 minutes in 1 hour and use to deduce that half hour = 30 mins and quarter hour = 15 mins.  Understand and use quarter-to: analogue and digital time.  Calculate durations involving hour, half past, quarter-past and quarter-to start and finish times, including counting through the hour.  Calculate finish /start times, given the duration (hours, half hours, quarter hours) and start/finish time, including counting through the hour  Calculate how long it will be until an event starts, and how long since an event finished: hour, half hour and quarter hour answers only. | Estimate, measure and compare lengths in metres.  Estimate, measure and compare lengths in half metres, metres and half metres.  Estimate, measure and compare the weight of objects in kg.  Estimate, measure and compare weight of objects in half kg, kg and half kg.  Estimate, measure and compare the capacity of containers in litres.  Estimate, measure and compare the capacity of containers in half litres, litres and half litres.  Find the area of shapes by counting squares where the area :   * Is an exact number of complete squares. * Is made up of whole and half squares.   Understand and use 5 minute intervals “past” the hour: analogue and digital time.  Understand and use 5 minute intervals “to” the hour: analogue and digital time.  Appreciate and use important dates in the calendar.  Read and interpret information using a calendar (within 1 month only).  Estimate short durations ( 1 min, 5 mins ) through practical activities. | Estimate and measure shorter lengths in centimetres.  Discuss how to measure lengths more accurately – use metres and cm.  Use different measuring instruments, knowing how to use each one with reasonable accuracy.  Discuss and select an appropriate unit and measurement device for a particular job.  Estimate and measure the weight of lighter objects in multiples of 100 grams.  Discuss how to weigh items more accurately – use kg and grams.  Use different measuring instruments, knowing how to use each one with reasonable accuracy.  Discuss and select an appropriate unit and measurement device for a particular job.  Estimate and measure the capacity of smaller containers in multiples of 100 millilitres.  Discuss how to measure the capacity of containers more accurately – use litres and millilitres.  Use different measuring instruments, knowing how to use each one with reasonable accuracy.  Discuss and select an appropriate unit and measurement device for a particular job.  Through using different sized squares, appreciate the need for a standardised square to measure and compare areas.  Calculate start, finish, durations, how long until? How long since? using multiples of 5 minutes, including counting through the hour.  Know the number of days in each month. |
|  | Term One | Term Two | Term Three |
| S S  H P  A & A  P C  E E | Understand and use concept of symmetry through practical activities. Recognise one line of symmetry in a variety of 2D shapes, designs and pictures.  Fit shapes together to make new shapes (e.g. tangrams).  Sort 2 D shapes into those with square corners and those without.  Recognise and describe an increasing range of 3D shapes, to include pyramid, prisms.  Understand and use “quarter turn”, ¾ turn.  Understand and use “left”, “right” to describe direction of turn. | Identify more than one line of symmetry in a variety of 2D shapes, pictures and designs.  Understand and use concept of tessellation through practical activities.  Understand and use term “right- angle” to describe corners in 2D shapes.  Understand definition of prism and that many 3D shapes are also prisms, defined by their end-face shape. (e.g. a cuboid with a square end-face is also a prism).  Understand and use “clockwise”, “anticlockwise” to describe direction of turn.  Understand and use term “right- angle” to measure an amount of turn. Know that a turn of 1 right angle is the same as a quarter turn, two right angles is the same as a half turn, three right angles is the same as a ¾ turn and four right angles is the same as a full turn. | Identify which 2D shapes will tessellate and which will not.  Identify right-angles in the environment, using a right-angle tester.  Identify angles in 2D shapes which are greater than or less than a right angle.  Understand that there are always two ways to turn towards a particular direction e.g. ¼ turn clockwise or ¾ turn anticlockwise will have the same effect.  Use simple grid references to identify a particular square on a grid. |
|  | Term One | Term Two | Term Three |
| H  A  N D  D A  L T  I A  N  G | Investigate issues which require collecting data.  Use tallying methods (bar-gate convention to represent groups of 5) where it is not possible to collect all data at the same time (e.g. if surveying the frequency of different colours of cars passing along a road).  Collect data in context of observations, surveys and experiments.  Understand and interpret simple pie charts with up to 4 sectors, by comparing size of sectors. | Construct own Tree, Venn and Carroll diagrams and use to sort sets of objects, shapes, pictures or numbers etc for two criteria.  Represent data from frequency tables as bar charts (vertical and horizontal), using paper and ICT, correctly labelling the axes.  Understand terms vertical axis and horizontal axis.  Interpret given and self-constructed bar charts.  Represent data by constructing and interpreting pictograms where the symbol represents more than one object. | Discuss the labelling of the frequency axis on bar charts. Identify situations where labelling may not be in ones (e.g. where the frequency is too great for the axis to fit on the page).  Discuss, draw and label bar charts which require scales, using paper and ICT. Interpret results and draw appropriate conclusions.  Investigate statements to see if they are true or false using data handling skills to identify and collect data, display data graphically and interpret results.  Access information using a computer database (e.g. Information Workshop 2000) answering one criterion questions. |