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| **Y5 Objectives:** Understand place value in 5-digit numbers; place 5-digit numbers on a line; order and compare 5-digit numbers; add and subtract 1s, 10s, 100s, 1000s and 10,000s; use written addition to add pairs of 4-digit numbers and pairs of 5-digit numbers.  **Y6 Objectives:** Understand place value in 6-digit numbers; place 6-digit numbers on a line; order and compare 6-digit numbers; add and subtract 1s, 10s, 100s, 1000s, 10,000s and 100,000s; use written addition to add pairs of 5-digit numbers. | | | | | | | | | | | | | | |
|  | **Very quick starter** | | | Whole class teaching | **Guided group and independent paired/indiv practice activities** | | | | | | | **Plenary** | | |
| Monday | **No starter** | Place value in 5-digit numbers (PV additions/subtractions);  Place value in 6-digit numbers (PV additions/subtractions)  Write 23,456 on the board. Explain that the digits before the comma tell us how many 1000s, and the digits after the comma tell us the 100s, 10s and 1s. Read the number: *23 thousand, four hundred and fifty-six*. *The comma helps us to read the number, the digits before the comma tells us how many 1000s.* Read, but don’t show 43,261. Chn write the number on their w/bs*. Make sure the comma doesn’t look like a decimal point!* Say that in this number the 4 tells us how many ten 1000s, and then the 3 how many one 1000s. Show a vertical place value chart (*see resources*). Ring one number in each column. Chn write the 5-digit number created. Include 5-digit nos using only 3 or 4 cards, e.g. 40,156, 40,306 and 43,150. Chn write 43,561. *What is 43,561 – 3000? Which digit will change? Subtract 500. What are we left with? Subtract 61. What’s left? Add 4, what do we have now? Add 210.* Write 723,456. Explain that this time there are 723 thousands. Read the number. Show a 6-digit vertical place value chart (*see resources*). *This time we have 100s of thousands!* Ring one number from each column and ask a Year 6 child to write the total on the board. Discuss how we could ‘zap’ each digit, subtracting 700,000, 20,000, 3000, 400, 50 or 6. | | | | | **GUIDED**: Y5 Easier  Write 50,555 on the f/c. *I want to make all digits the same (5), just by adding one number. How could I do this? What could I add?* Chn test ideas on a calculator. *What if I started with 55,505? Or 5555? 55,550?* Rpt with other 5-digit nos. Ask chn to make a 5-digit number, then to write addition sentence, e.g. 40,000 + 2000 + 300 + 50 + 6 = 42,356. Rpt with two other 5-digit nos. | | | | Y5 Harder  Chn use knowledge of place value to complete number sentences (*see resources*). | | Chn use the digits 3, 4, 5, 6 and 7 to make five 5-digit numbers and write them on their w/bs. *Ring a number where: 6 is worth 60,000 / 3 is worth 3000 / 4 is worth 400…* The 1st child to ring all 5 nos is the winner. | |
| Y6 Easier, TA if available  Chn work in pairs to ring one number from each column in a coloured pencil. They write the total in their books. Rpt with other coloured pencils to make new numbers. | | | Y6 Harder  Chn use knowledge of place value to complete number sentences (*see resources*). | | |
| Tuesday | **+/– 100 to/from 4-digit nos**  Chn pass a beanbag round, counting on in steps of 100 from 1463, until past 2000. Shout *change!* Chn pass beanbag back, counting back in 100s. | | Add/subtract 1s, 10s, 100s, 1000s and 10,000s;  Add and subtract 1s, 10s, 100s, 1000s, 10,000s and 100,000s  Write 45,462 on the board. *What number is 1 more? Write it. 10 more? 100 more? 1000 more? 10,000 more?* Rpt with 36,478 but chn write the number that is 1 less, 10 less, 100 less, 1000 less, then 10,000 less. Enter 30,567 into an IWB calculator. *We will add or subtract multiples of 10,000, 1000, 100, 10 and 1 to make all the digits the same (4), so the new number will be 44,444.* Write this. *How can we make the first digit change to 4?* Agree that 10,000 needs to be added and use the calculator to do this. Repeat with each digit. ***Send Y5 away now to work with TA or independently.*** Ask 6 chn to make a counting machine. Each has a pack of 0–9 cards. Ask them to make the number 478,695 and then add 1 repeatedly until they reach 478,701. The rest of Y6 check. Rpt with 6 new chn adding 10 until they reach 478,725. Call out instructions such as + 200,000, – 40,000. The chn with the cards work together to make the new number. The rest of the group check. | | | Y5 Easier, TA if available  Chn roll a 1–6 dice five times to make a 5-digit number. They work out what to add and subtract, one stage at a time, to make 55,555. | | | Y5 Harder  Chn work in pairs, both write 11,111. They take turns to roll a dice and choose to add that many 1s, 10s, 100s, 1000s or 10,000s, aiming to get close to 99,999 but NOT more. If chn go over, they lose! They can ‘stick’ before rolling dice. Who gets closest to 99,999? Write 99,999. Subtract 1s, 10s, 100s, 1000s or 10,000s to get close to 11,111 without going under. | | | | | Chn work in groups. Ask Y5 to write 45,875, then pass to the next child to add 10, writing the answer underneath. Keep going until past 45,900. Y6, start with 245,875. Rpt but this time count in steps of 100 through 46,000 or 256,000. |
| **GUIDED:** Y6 Easier  Chn roll a 0–9 dice six times to make a 6-digit number. They work out what to add and subtract, one stage at a time, to make the number 555,555. | | Y6 Harder  Chn work in pairs. Write 111,111. Roll a dice in turn. Choose to add that many 1s, 10s, 100s or 1000s, 10,000s or 100,000s, aiming to get as close to 999,999 as they can but NOT going over. If chn go over they lose! They can choose to ‘stick’ before rolling dice. Who gets closest to 999,999? Write 999,999 and subtract 1s, 10s, 100s or 1000s, 10,000s or 100,000s to get as close to 111,111 as they can without going under. | | | | | |

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|  | **Very quick starter** | | | Whole class teaching | | **Guided group and independent paired/indiv practice activities** | | | | **Plenary** |
| Wednesday | **No starter** | Place 5-digit numbers on a line and compare pairs of numbers, use < and >; place 6-digit numbers on a line and compare pairs of numbers, use < and >  Draw a 5-cell box. Shuffle 0–9 cards. Draw out one card, e.g. 7. *Where shall we put this digit to make the largest 5-digit number we can?* Rpt until all spaces are filled. Now chn write largest possible number*.* Chn also write smallest number possible. Show a 0–100,000 landmarked line (*see resources*). Ask chn to say roughly where each of the 3 nos belong on the line – between which 10,000s. Ask chn up to mark them. Rpt with 5 new digits.  ***Send Y5 away now to work with TA or independently***  Repeat, this time drawing a 6-cell box and drawing six cards, one at a time. Show a 0–1,000,000 landmarked line (*see resources*). Ask chn to say roughly where each of the 3 nos belong on the line – between which 100,000s. Ask chn up to mark them. Rpt with 6 new digits. | | | Whole class activity  Chn play in pairs. Y5 chn shuffle a set of 0–9 cards, and deal five cards each which they use to make 5-digit numbers in the order they come in. The child with the largest number wins. They write an inequality, e.g. 75,341 > 69,820. They record both numbers on the 0–100,000 landmarked line (*see resources*).  Y5 Easier, TA if available  Chn may not place the numbers on the line as accurately as others, but check that they are placing them in between the correct multiples of 10,000.  Y6 Easier  As above but chn take it in turns to shuffle the cards, take 6, then return to the pack. They use these to make 6-digit numbers and place on a 0–1,000,000 landmarked line (*see resources*).  **GUIDED:** Y6 Harder  Work as a group to make two 6-digit nos. Place on a large empty 0–1,000,000 line. Ask pairs of chn to agree where to place them. What knowledge can they use to help them to place the numbers? E.g. using knowledge of placing 3-digit nos between 0 and 1000. | | | | Ask Y5 chn to use the digits 1 to 5 to make a number as close to 50,000 as they can. Y6 chn use digits 1 to 6 to make a number as close to 500,000 as they can. Rpt for a number between 30,000 and 40,000 (Y6 between 300,000 and 400,000), a number less than 20,000 (Y6 less than 200,000), etc. | |
| Thursday | **Add 3 single digit nos**  Chn work in groups of four. One child rolls three 0–9 dice at the same time. The 1st child says the correct total rolls them next time and so on. Chn share tips e.g. look for pairs to 10, doubles put the largest number first. | | Revise using column addition to add pairs of 4-digit numbers;  Revise using column addition to add pairs of 5-digit nos with 5-digit answers  Write 3458 + 2477, 3478 + 2827 and 3455 + 2327 on the board. *Which do you think will have the biggest answer and which do you think will have the smallest answer?* Ask chn to talk to their partner and agree an order without working out the three answers.Take feedback about how they did this. Draw out how each could be rounded to the nearest 1000 to give an approximation, in which case the first and last would have the same approximation. Discuss how each could be rounded to the nearest 100, and then how knowledge of adding pairs of 2-digit nos could be used to find more accurate approximations. Model working through the first addition, carefully talking though each stage, e.g. 8 and 7 is 15; write 5 in the 1s column and 1 in the 10s column. Remind chn to leave a blank row below the second number and write the extra 10s, 100s and 1000s here so they don't forget to add them in when adding digits in the next column.  3 4 5 8  + 2 4 7 7  1 1 .  5 9 3 5 Split the class into two groups. Ask each one to work out one of the other two additions (2nd is more difficult than 3rd). ***Send Y5 away now to work with TA or independently.*** Write 24,456 + 18,345. Remind chn that we can use same method, we just have more digits! Work through the calculation together, carefully talking through the addition of the digits in the 1000s column, giving 12,000, so we need to write 2 in the 1000s column and 1 in the 10,000s column. Ask chn to use digits 0 to 9 to create two 5-digit numbers between 30,000 and 40,000 and find the total. | | | | Y5 Practice  Chn use compact column addition to work out as many answers as they can starting at question 5 and do as many as they can (*see resources*).  Easier, TA if available  Chn use expanded if necessary, and do the first 8 questions. | | | Write 2321 + 2001, 2789 + 5428, 4321 + 2211, 8478 + 6945, 2349 + 3218, 3758 + 2785 on the board and ask chn to discuss in pairs which they think might be the easiest or quickest to answer and why. Take feedback, Rpt for the most difficult or slowest to work out. |
| GUIDED: Y6 Easier Show the place value chart (*see Monday’s resources*) and block out 60,000, 70,000, 80,000 and 90,000. Ask a child to place a red counter on a number in each column and write the resulting 5-digit no. on the f/c in red pen. Ask another child to do the same using blue counters and blue pen under the red number. Work together to find the total. Rpt with other chn. | Y6 Harder  Ask chn to use digits 0 to 9 to create pairs of 5-digit numbers with totals between 50,000 and 100,000. What’s the smallest answer that they can find and the largest? | |

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|  | **Very quick starter** | | Whole class teaching | | **Guided group and independent paired/indiv practice activities** | | | | **Plenary** |
| Friday | **Pairs to 100**  Fill a five-by-four grid with 2-digit numbers. Chn draw a similar grid and fill with the complements to 100 as quickly as they can. Check as a class. | Begin to use column addition to add pairs of 5-digit nos; Use column addition to add pairs of 5-digit nos with 6-digit answers  Show the table of hits on a website over the week (*see resources*). *Roughly how many people visited the website on Monday (am and pm)?* Discuss rounding to the nearest thousand, and adding the two-digit numbers of 1000s. Show chn how to use column addition to add the two numbers on Sunday. Carefully talk through the addition of the digits in the 1000s column, and the writing of 1 in the 10,000s column. Repeat for Sunday on the grid, carefully talking through the addition of the 100,000s and discussing how this gives a 6-digit total. | | Y5 Easier, TA if available  Ask chn to use digits 1 to 8 to create two 4-digit numbers. They aim to have a total between 6000 and 8000. How many can they find? | | **GUIDED** Y5 Harder  Show the place value chart (*see day 1 resources*) and cross out 60,000, 70,000, 80,000 and 90,000. Ask one child to place a red counter on a number in each column and write the resulting 5-digit number on the f/c in red pen. Ask another child to do the same using blue counters and blue pen under the red number. Work together to find the total. Rpt with other chn. | | *Can you think of an addition of a pair of five-digit numbers where you wouldn't need to use a written method?* Ask each pair to write four and share with another pair. Take feedback. What did they have in common? E.g. multiples of 1000, near multiples of 10,000, i.e. ‘friendly’ numbers to add. | |
| Y6 Easier Chn work in pairs, they each use digits 1 to 6 to make a number less than 50,000. They find the total. Rpt. What is the smallest answer they find and the largest? | | | Y6 Harder  Chn find the total number of hits on the website for the remaining days of the week (*see resources*). |

**Resources**

* Monday: Vertical 5-digit and 6-digit place value charts (*see resources*)
* Monday: Activity sheets of incomplete place value number sentences (versions for Y5 Harder group and Y6 Harder group) (*see resources*)
* Calculators
* Bean bag
* 0–9 cards
* 1–6 dice and 0–9 dice
* 10s cards
* Wednesday: 0–100,000 landmarked line and 0–1,000,000 landmarked line (*see resources*)
* Thursday: Year 5 practice (*see resources*)
* Red and blue counters
* Table of hits on a website (*see resources*)

**Outcomes**

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|  | **Outcomes for most children** | | | | |
|  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| **Year 5** | 1. Partition 5-digit numbers in 1000s, 100s, 10s and 1s.  2. Say what each digit represents in 5-digit numbers.  3. Complete place value additions and subtractions. | 1. Add/subtract 1s, 10s, 1000s and 10,000s to/from 5-digit numbers. | 1. Compare 5-digit numbers using > and < signs.  2. Place 5-digit numbers on 0–100,000 landmarked lines. | 1. Use column addition to add any pair of 4-digit numbers.  2. Approximate answers. | 1. Begin to use column addition to add pairs of 5-digit numbers. |
| **Year 6** | 1. Partition 6-digit numbers in 1000s, 100s, 10s and 1s.  2. Say what each digit represents in 6-digit numbers.  3. Complete place value additions and subtractions. | 1. Add/subtract 1s, 10s, 1000s, 10,000s and 100,000s to/from 6-digit numbers. | 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. | 1. Use column addition to add pairs of 5-digit numbers, with 5-digit answers. | 1. Use column addition to add pairs of 5-digit numbers, with 6-digit answers. |
|  | **Default (outcomes for children not on statements but not able to reach the outcomes for most children)** | | | | |
| **Year 5** | 1. Partition 5-/6-digit numbers in 1000s, 100s, 10s and 1s.  2. Say what each digit represents in 5- and 6-digit numbers. | 1. Add/subtract 1s, 10s, 1000s and 10,000s to/from 5-digit numbers without crossing 1s, 10s, 1000s or 10,000s. | 1. Compare 5-digit numbers using > and < signs.  2. Begin to place 5-digit numbers on 0–100,000 landmarked lines. | 1. Use column addition to add pairs of 4-digit numbers requiring one or two ‘carries’. | 1. Use column addition to add any pair of 4-digit numbers. |
| **Year 6** | 1. Partition 6-digit numbers in thousands, hundreds, tens and ones.  2. Say what each digit represents in 6-digit numbers. | 1. Add/subtract 1s, 10s, 1000s and 10,000s to/from 6-digit numbers without crossing 1s, 10s, 1000s, 10,000s or 100,000s. | 1. Compare 6-digit numbers using > and < signs.  2. Begin to place 6-digit numbers on 0–1,000,000 landmarked lines. | 1. Use partitioning to begin to add pairs of 5-digit numbers. | 1. Use column addition to add pairs of 5-digit numbers, with 5-digit answers. |

**Only record names of children who struggled or exceeded these outcomes**