

Week 1

Focus + Resources	Lesson Notes
<p>Lesson 1</p> <p>Main Focus Read and write 5-digit numbers, understanding the place value</p> <p>Objectives Understand place value in 5-digit numbers by creating 5-digit numbers, placing them on a number line and solving place value additions and subtractions</p> <p>Key Vocabulary compare; digit; order; place value; zero</p> <p>Prior Learning Read and write numbers with up to 4-digits, understanding what each digit represents</p> <p>Resources</p> <ul style="list-style-type: none"> • Place value arrow cards from 10 to 90,000 – see Preparation notes • Number cards 0-9 – see Preparation in Teaching Tips below • Small whiteboard (supplied by WES) • Y5 Textbook 1 • Resource Sheet 1a (from Term 1 appendix) 	<p>Starter - Multiple of 10 bonds up to 1,000</p> <p>Say a multiple of 10. Ask your child to write the complement to the next hundred (eg you say 20, she says 80). Explain that she will be playing a game against you! Take turns to say a multiple of ten, and respond with the complement to the next 100 (eg: 60 → 40, 120 → 80, 980 → 20). Score one point for each correct answer. If your child is confident with this, you could give some deliberately incorrect answers for her to try to spot (award one point for spotting a 'deliberate mistake!'). Leave the scores on display as you will be adding to them over the next two days' lessons!</p> <p>Main Teaching</p> <ul style="list-style-type: none"> • Recap on how to read some 4-digit numbers, starting with two straightforward ones (eg 6,375; 7,294) then some with zeroes and teens (3,105; 2,517; 9,036; 4,080; 3,016; 5,001). Remind your child that the space separates the thousands from the hundreds, tens and ones (see Teaching Tips below). • Using the number (digit) cards, make and show your child the number 56. Ask her to say the name of the number. Add the digit 8 to the left of the 5. <i>What number does it show now?</i> (eight hundred and fifty six). Now add the digit 4 to the left of the 8. Ask your child to name the new 4-digit number (four thousand, eight hundred and fifty six). Explore the effects of rearranging the digits to illustrate the effect of the position of the digit in a larger number. • Write some straightforward 5-digit numbers on the board (23,467; 94,245; 27,839) and ask your child to suggest how to say these numbers in words. Establish that the numbers before the space are how many thousands there are: 23,467: twenty-three <i>thousand</i>, four hundred and sixty-seven, so the number after this space is simply the normal 3-digit number they know well. • Show your child place value arrow cards to show that a single digit, eg 4, can mean 4 ones or 4 tens or 4 hundreds or 4 thousands or 40 thousands, depending on where it is written in the number. Explain how we can use 0 as a place holder. If we have no hundreds but 13 thousands and 70 we write 13,070. We need the 0 in the hundreds place because if we write 1,370 that is not 13 thousand but one thousand, three hundred. • Practise reading some more awkward numbers that include zeroes and/or teens: (27,205; 30,650; 81,092; 76,300; 22,041; 45,013; 50,000; 70,004; 60,019). • Ask your child to write a 5-digit number on her whiteboard. Ask her to share and read her numbers. Remind your child that there must always be 3 digits after the space for the hundreds, tens and ones, even if one or more of the digits is zero. Look at some common errors such as writing 45,068 as 4,568. Ask your child what each digit represents, establishing that the first digit in a 5-digit number is the tens of thousands. <i>What is the digit 5 worth in your number?</i> Check spelling and provide words on maths word wall. • Use Resource Sheet 1a. You say a 5-digit number, she writes it on the grid, with the digits in the correct columns. <i>How many tens are there? How many tens of thousands?</i> Show correctly on place value arrow cards for your child to check her work. Discuss any errors then repeat.

<p>Week 1 Lesson 1 cont/</p>	<ul style="list-style-type: none"> • Ask your child to write a number on her grid with no hundreds or tens: 3 in the ten thousands place, 9 in the thousands place and 6 ones. Ask her to read the number aloud. Show on place value arrow cards and read. • Repeat with 7 in ten thousands place, 5 in tens place and all other places zero. • Finally, choose three 5-digit numbers all with 5 thousands. Write them on the board and ask your child to order them, smallest to largest. Repeat with a set of four 5-digit numbers. • Using a shuffled set of 0-9 number cards take 5 cards. Ask your child to make three numbers: the largest and the smallest number they can and a number in between. They write each number in words. Children should then explain how they know how to make the biggest and how to make the smallest number. <i>What do they do?</i> Your child should write at least one full sentence explaining how they do this. • Ask your child to complete page 4 in <i>Y5 TB1</i>. <p>Plenary <i>What would happen if we wrote 207 with no zero? (27!) Our system is called a base ten system and the zero, which can be used as a place holder, originated in Ancient India. Recap on reading and writing three more 5-digit numbers where there are zeroes included.</i></p>
<p>Lesson 2</p> <p>Main Focus Read and write 5-digit numbers, understanding the place value and add and subtract multiples of 10, 100 and 1000 to and from 5-digit numbers</p> <p>Objectives Understand place value in 5-digit numbers by creating 5-digit numbers, placing them on a number line and solving place value additions and subtractions</p> <p>Key Vocabulary compare; digit; order; place value; zero</p> <p>Prior Learning Read and write 4- and 5-digit numbers, understanding what each digit represents</p>	<p>Starter - Multiple of 5 bonds to 1,000 Write a multiple of 5 under 100. Ask your child to write the multiple of 5 bond to make 100 (eg 25 → 75). Demonstrate the number will also be a multiple of 5 because $5 + 5 = 10$, then use bonds to 100 as yesterday, eg $35 + 5 = 40$, $40 + 60 = 100$ so 65. Take it in turns, playing the same game as yesterday, awarding extra points for spotting any 'deliberate mistakes'. Today's game will be more difficult though. Start with 45, 75, 65 then 15. If your child can manage this easily, move on to totalling 200 (125, 185), then 300 (275, 205,) and so on up to 1,000 (915, 965). Leave the scores showing and explain tomorrow you will both have the chance to get some more points! If this is difficult for your child, repeat yesterday's starter, using multiples of 10.</p> <p>Main Teaching</p> <ul style="list-style-type: none"> • Ask your child to write the number: forty-three thousand, seven hundred and fifteen. • Now ask her to write the number on the place-value grid on Resource Sheet 1b. Check that your child has done this correctly, discuss and review as necessary. • Ask your child to add 10 to 43,715. Watch carefully – does she know just to change the 1 in the tens column to a 2? Does she try to count on? • Remind your child these are what we call 'no work' additions or subtractions! We just have to know which digit we change. They are EASY, no real work! • Have your child add another 10, ensuring she changes the 2 into a 3 in the 'tens' column. Repeat, adding another 10. Then repeat, subtracting 100 – which digit changes? What about if we add 100? Repeat, asking your child to add or subtract 1, 10, 100, 1,000 and 10,000. Discuss what happens – which digit is changing?

<p>Week 1 Lesson 2 cont/</p> <p>Resources</p> <ul style="list-style-type: none"> • Place value grid (Resource Sheet 1b) • Place value arrow cards to 5 digits • Y5 Textbook 1 • For support activity: 1-100, 101-200, 201-300 and 301-400 squares (Resource Sheets 2, 3, 4 and 5 from Term 1 Appendix) <p>KS2 Problem solving 3 (KS2 PS) for extension activity</p>	<ul style="list-style-type: none"> • Include some examples such as adding 10 to 23,497, adding 100 to 36,917. Does adding 10, 100, 1,000 ever mean two digits change? When does this happen and why? • Repeat with adding/subtracting multiples of 10, 100, 1,000 – use numbers where only one digit changes initially, eg $63,769 + 20$, $42,756 - 400$, $19,473 - 6,000$. Only introduce examples where more than one digit changes if your child is confident with the concept and avoid numbers where the 10 thousand would change from 90 thousand to 100 thousand (eg $53,896 + 300$, $54,708 - 70$). • Say numbers for your child to make using place value arrow cards Start with 4-digit numbers, moving quickly on to 5-digit as soon as is appropriate. Ask your child to separate their place value cards to write additions, ie $4,581 = 4,000 + 500 + 80 + 1$ etc. As she becomes confident, ask her to add 10, 100, 1,000 to her number. Ask her to identify the card that will alter as she adds/subtracts 10, 100, 1,000. Model making 27,948 using place value arrow cards. Then write $27,948 + 100 =$. <i>Which card changes?</i> (900). <i>What happens?</i> 9 becomes 0 and we have to add on 1,000 to the 2,000. <i>Why?</i> Discuss and ask your child to make 9,999 then add 10. <i>What happens?</i> Swap cards all the way until she has 10,009. Repeat, this time subtracting 10, 100 or 1,000. • Ask your child to complete page 7 in <i>Y5 TB1</i>.
<p>Lesson 3</p> <p>Main Focus Use < and > signs to compare and order 5-digit numbers</p> <p>Objectives Order and compare 5-digit numbers and say a number between</p> <p>Key Vocabulary compare; less than; more than; order</p> <p>Prior Learning Read and write 4- and 5-digit numbers; order 4-digit numbers</p> <p>Resources</p> <ul style="list-style-type: none"> • 0-9 digit cards • An inequality sign drawn onto a blank card (from the WES Maths Kit) • Y5 Workbook1 • Y5 Textbook 1 for support activity 	<p>Starter - Bonds to 100</p> <p>Read the current score for the game you've been playing over the last 3 days. Explain that today is the final day! Tell your child today she is revising bonds to 100 again, but will be practising with numbers that are not multiples of 10 or 5! Model 22, $22 + 8 = 30$, $30 + 70 = 100$ so 78. Use different ways of saying it: <i>What do I have to add to 46 to make 100? 100 subtract 61 is...</i> <i>Which number pairs with 73 to make 100? I spend 29p, what is my change from £1? I bought some sweets with £1 and received 54p change, how much were the sweets?</i> Add up scores (hopefully your child is the winner!).</p> <p>Main Teaching</p> <ul style="list-style-type: none"> • Ask your child to remind you what you have been learning about - big numbers, numbers in the tens of thousands, numbers with 5 digits. Explain today she will be writing and comparing 5-digit numbers using crocodile to help (see Teaching Tips for today). • Place different digit cards on the table with a space between them. Place the inequality sign between the two number cards: <i>What does the crocodile do? Which way should the sign face?</i> Remind your child that the crocodile always eats the biggest number. Show the crocodile/inequality signs < and > and explain the croc's mouth is always open to the biggest number. • Make the numbers 23,851 and 45,709, using digit cards. <i>Which is bigger? How do we know?</i> Discuss, looking at the highest place value first. The ten thousand digits are 2 and 4, which means 20,000 and 40,000. As 40,000 is more than 20,000, 45,709 is obviously bigger than 23,851, so 23,851 is less than 45,709. Ask your child to place < or > between the two numbers so that the number sentence is correct $23\ 851 < 45\ 709$. Read it together, using both 'less than' and 'more than': <i>23,851 is less than 45,709 and 45,709 is more than 23,851</i>. Repeat with other examples.

<p>Week 1 lesson 3 cont/</p>	<ul style="list-style-type: none"> • Short tasks <ol style="list-style-type: none"> 1. Working in pairs (with you or another child) both write a 5-digit number. Read the numbers to each other then she decides which is larger by each writing both numbers and putting a < or > sign between to form a correct greater than or less than sentence. Repeat with a second pair of numbers. 2. Write down four 5-digit numbers. Ask your child to write these in order from smallest to largest, inserting < as appropriate to make a true number sentence. • Discuss how you order numbers. What happens if the tens of thousands digit is the same? Look at the thousands digit, if this is the same look at the hundreds digit, etc. • Ask your child to order this set of numbers: 25,857; 25,199; 24,987; 26,008 and this set: 19,408; 19,840; 19,084; 19,804. Discuss the process with them. • Ask your child to complete Worksheet 1 in <i>Y5 Wbk 1</i>. Ask her to write a rule for how to compare numbers. Remind her to check after she finishes that the 'crocodile' is 'eating' the bigger number. <p><i>Send this work to your child's tutor at the end of week 6.</i></p> <p>Plenary</p> <p>Write the numbers 28,315, 28,351, 28,513, 23,851, 82,513 on cards. Ask your child to arrange these numbers in order from smallest to largest. Discuss how they should do this. Discuss any mistakes and demonstrate how we have to look at the place of each digit carefully because, although the same figures are used, it is where the digits are used (their place) that tells us the size (value) of the number.</p>
<p>Lesson 4</p> <p>Main Focus Use written addition to add two 4-digit numbers giving answers with up to 5-digits</p> <p>Objectives Use column addition to add two 4-digit numbers with answers > 10000</p> <p>Key Vocabulary addition; digit; compact; expanded; method; estimate; rounding</p> <p>Prior Learning Written addition; understanding of place value in numbers with up to 5 digits</p>	<p>Starter – Adding pairs of numbers that total teen numbers</p> <p>Ask your child to write as many bonds to 17 as she can in 2 minutes. Go through them, highlighting the tricky ones to remember, eg 8 + 9, 12 + 5, 13 + 4. Demonstrate why 11+ 6, 10 + 7, 15 + 2, 16 + 1 are easy to know because you're adding 10 or 11 or 1 or 2, so they are quick, easy mental additions. Repeat the activity, asking her to write list of bonds to 18 in 2 minutes. Again discuss and highlight the tricky ones. 13 + 5, 12 + 6, 14 + 4. Explain to children that it is actually quite easy to quickly work out all your bonds for all numbers up to 20 as for each number there are only a few tricky ones. Your child should learn her number bonds to 20 if she has not already done so – it really helps to know them.</p> <p>Main Teaching</p> <p>Tell your child she will be using written addition to add 4-digit numbers today.</p> <ul style="list-style-type: none"> • Use base 10 equipment to model the calculation $3,356 + 2,571$ (see Resource Sheet 6 illustrating this). Demonstrate how we can add 10 lots of 10 into the hundreds etc. When your child has seen this demonstrated with the base 10 equipment, show how we write the 10 above the line in the column and the ones answer goes in the answer space below the line $\begin{array}{r} 3356 \\ +2571 \\ \hline 1 \\ \hline 5927 \end{array}$

Week 1 Lesson4 cont/

Resources

- Base 10 equipment (This is a printed resource in the Introduction Appendix. The pictures represent 3-D arrangements of cubes organised to show 1s, 10s, 100s and 1000s)
- Resource Sheet 6 from Term 1 Appendix
- Y5 Textbook 1
- 0-9 digit cards for extension activity

- Ask your child what we should do if the thousands total more than ten thousand. Discuss writing the answer which will be a 5-digit answer.
- On a white board or on paper, model using compact form of written addition adding $8,316 + 5,477 =$. Write vertically, emphasising the importance of being neat and lining up the digits carefully. Draw the line below leaving a space above it for extra tens, hundreds, etc.

$$\begin{array}{r} 8316 \\ + 5477 \\ \hline \end{array}$$

- Ask your child to add the ones $6 + 7 = ?$ One less than double 7, 13; ensure they write the 1 under the tens above the line and the 3 below the line in the ones column. Now ask her to add the tens: $70 + 10 + 10 = 90$. Clarify that, as the addition is less than a hundred, there is no need to write anything in the hundreds column, only write the 9 in the tens column below the line. Continue, asking her to add the hundreds, $300 + 400 =$, and then to add the thousands, $8,000 + 5,000 = 13,000$, so the answer is a 5-digit number (13,793).
- Check the addition using expanded written method (learned in Y3, see Additional Teaching Points if you, or your child, are not familiar with this) – we can easily spot any errors. *Is the answer correct?*
- Discuss with your child which method she prefers. Remind your child of the importance of neatness – especially when writing in the extra digits generated from adding the previous column. We write these above the line so we do not forget to add them in. Tell your child she will be practising adding 4-digit numbers with answers that may be 4- or 5-digit numbers.
- Ask your child to solve $6,581 + 7,953 =$ as a written addition. She should use the compact method if she is confident to do so. Ask your child to estimate an answer first, using rounding, eg $6,600 + 8,000 = 14,600$. Check the answer with your child.
- Ask your child to complete page 9 in *Y5 TB1*.

Plenary

Show your child this addition:

$$\begin{array}{r} 6934 \\ + 5217 \\ \hline \end{array}$$

$$\begin{array}{r} 1111411 \\ \hline \end{array}$$

Is the answer correct? How can we tell? Too many digits! What have I done wrong? Explain you were not sure where to put the digits so you just wrote them all in a long line! Ask your child to estimate an answer, eg $7,000 + 5,200 = 12,200$. Then ask her to solve it showing you where to put the digits. Finally, compare the answer to the estimate.

<p>Lesson 5</p> <p>Main Focus Use written addition to add two 4-digit numbers and work systematically to spot patterns</p> <p>Objectives Use column addition to add two 4-digit numbers with a total $\leq 10,000$</p> <p>Key Vocabulary addition; compact; digit; estimate; expanded; method; palindromic number; systematic</p> <p>Prior Learning Written addition; understanding of place value in numbers with up to 5 digits</p> <p>Resources</p> <ul style="list-style-type: none"> • Resource Sheet 7 from Term 1 Appendix • Y5 Textbook 1 	<p>Starter - Count on and back from 4-digit numbers Choose 0-9 digit cards at random to make a 4 digit number. Ask your child to count back in 1s, crossing a multiple of 10. Generate a new 4-digit number and count back in 10s, crossing a multiple of 100. Repeat, generating new 4-digit numbers and counting back in 1s or 10s then 100s. If your child is confident with this, count on or back in 20s, 50s, 200s and 500s.</p> <p>Main Teaching</p> <ul style="list-style-type: none"> • Tell your child she is going to be adding numbers using the written method. Show Resource Sheet 7 with the voting results of the TV talent contest. Ask your child to look at the results – who got the most votes? Which act was the most/least popular? • How many votes did the dancing cat and the talking dog get altogether? Ask your child to write this as a vertical compact or expanded addition. If necessary help her solve it, ensuring any extra tens or hundreds made are put above the line in the correct column. Discuss answers in relation to the talent show. • How many votes did the three most popular acts get altogether? Ask your child what we need to do to work this out – add together the votes each act got. Write this as a vertical addition but ask your child to estimate the answer before working it out. Remind her that addition can be done in any order, so she can choose which number to write first. • Point out we can see when we will need to write an extra ten, an extra hundred, or thousands, even a ten thousand, because we can see when the numbers will total more than 10/100/1,000. Discuss any difficult parts when solving the addition and remind your child of the importance of keeping her work as neat as possible so she remembers all the parts – it is easy to miss an extra ten or hundred and so get the wrong answer. • <i>What is a palindrome?</i> Establish that it is a word that can be read the same forwards and backwards, like Anna. A number can also be a palindrome when it reads the same forwards and backwards, for example 3,883. Encourage your child to give some other examples of palindromic numbers. • Ask your child to write 4-digit palindromic numbers such as 3883 or 2772 etc. They add two such numbers and see if they can spot any patterns in the answers. Repeat. <i>Are there any patterns? How do the patterns work? When will the answer be a palindromic number?</i> Encourage your child to try numbers systematically, eg $1221 + 2332$, $2332 + 3443$ etc or $1221 + 2332$, $1221 + 3443$ etc. <i>Can they spot patterns now?</i> For example, the answer will be a palindromic number when the digits in each pair do not add to more than 9, eg $3443 + 4554 = 7997$ but $3443 + 5665 = 9108$. <p>Plenary Share and discuss findings from the Problem-solving activity on palindromic numbers. If your child has not found patterns, give examples of groups of calculations that will give a palindromic answer and those that will not. Can she work out why and give another example for each group? The answer will be a palindromic number when the digits in each pair do not add to more than 9. Ask your child to explain why the total of each pair has to be 9 or less for the answer to be palindromic. Does she understand that the answer will not be palindromic if the total of the digits in each pair crosses 10 or 100?</p>
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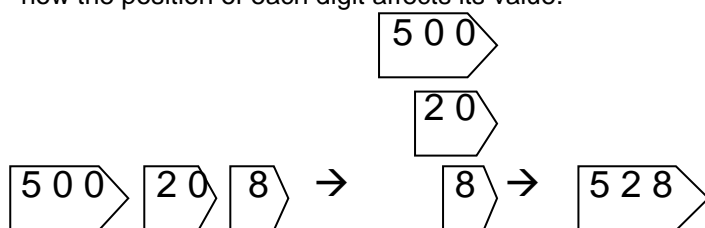
Week 1 Additional Teaching Points

Preparation

- Check that you have resources listed ready. You will need to write the digits 0-9, and an inequality sign (>) on some of the blank cards supplied in the WES Maths Kit (one digit per card).
- Prepare the place value arrow cards (from the Introduction Appendix). If possible, copy them or mount them onto card. They need to be sturdy as we will be using them a great deal! These are used to construct numbers by placing the cards one on top of the other, with the 'arrows' lined up. This makes it clear what each digit stands for.
- Cut out the base 10 materials (from the Introduction Appendix). These are pictures representing cubes organised into 1s, 10s, 100s and 1,000s. These will be used a great deal so mount onto card if possible.
- Prepare a 'Maths Word Wall' – a simple display area where you can display useful maths words for your child to refer to.

Teaching Tips

The place value (arrow) cards are an invaluable resource. Use them to help your child understand how the position of each digit affects its value.



Arrow cards are a set of place value cards with an "arrow" or point on the right side. Pupils can arrange the cards to make numbers in expanded form. They can overlap cards and line up the arrows to form larger numbers

Lesson 1

See **Points of Style** on page 1 of these notes to explain how your child should record numbers in the thousands. Although numbers are shown with commas in these teaching notes, she should follow the examples in the textbook when writing numbers in her exercise book.

Support

Working with your child, use place value arrow cards to make a 4-digit number. In turn say your number, then compare, deciding whose is largest and why. Ask questions, eg *How many hundreds has it got? How many ones? What is the value of the 5 in this number?* Ask children to swap one of their digits for a zero, now say the new number etc. Use money to try and show children the quantitative difference between each digit and its place, eg 1p, 10p, £1 (100p), £10 (1,000p) £100 (10,000p). *Just think of what you can buy for £1 (100p) or what you can buy for £100 (10,000p).*

Extension

Y5 Textbook 1 page 5 including the 'THINK' activity

Lesson 2

Support

Build up knowledge and understanding by starting with 3-digit numbers and using a 1-100 square (Resource Sheet 2) to count in 10s and 100s without crossing the hundreds or thousands. Use place value grids (Resource Sheet 1) to identify which digit needs to change. Use 1-100, 101-200, 201-300 and 301-400 squares from Resource Sheets 2, 3, 4, & 5 to model what happens when you add 10 to 95, 100 to 247, for example.

Ask your child to complete page 6 in Y5 Textbook 1, instead of page 7

Extension

There is no extension activity for today's lesson. If your child finishes the activities quickly and easily, she should complete page 6 (Number Puzzles) from KS2 Problem Solving 3.

Lesson 3

'**Crocodile**' is a way of explaining the < and > inequality signs. < means 'is less than' whilst > means 'is greater than'. They look like the open jaws of a crocodile. You can draw in teeth and a body if you want to! The crocodile always tries to eat the larger number; this will help your child remember how to orientate the inequality sign.

Support

Ask your child to complete page 8 in Y5 Textbook 1 moving on to the first 8 questions on Worksheet 1 in Year 5 Workbook 1 (the left column) if she completes this confidently.

Extension

When completing the final challenge on Worksheet 1 ask your child to choose four pairs of numbers from the right-hand column to order. She should write a rule for how to compare numbers.

Lesson 4

Expanded Written Method for Addition:

The numbers are partitioned and the calculation is performed vertically:

$$\begin{array}{r} 357 + 426 \rightarrow 3\ 5\ 7 \rightarrow 300 + 50 + 7 \rightarrow 300 + 50 + 7 \\ \quad \quad \quad \quad \quad + 4\ 2\ 6 \quad \quad + 400 + 20 + 6 \quad \quad + 400 + 20 + 6 \\ \hline \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad 700 + 70 + 13 = 783 \end{array}$$

Support: Adding two 4-digit numbers

Ask your child to write some 4 digit numbers where the thousands digits are less than 5. Choose two numbers for her to add (initially, choose two where she will only carry one digit) eg 4,372 + 2,546. Help your child to write this out as an expanded vertical addition, demonstrating lining up the numbers in columns and leaving space before drawing the line (with a ruler). Remind her she should start at the ones and ask her to add the ones, then the tens - discussing how she writes the answer each time. Check, modelling the compact version and praise your child for using the written method and getting a correct answer. Repeat, choosing two more of your child's 4-digit numbers. Generate more 4-digit numbers where necessary. Move to working independently, supporting as needed, discussing where and why errors are likely to occur.

Extension: Adding 4-digit numbers

Ask your child to generate additions using 0-9 number cards. She makes two 4-digit numbers and writes as a compact written addition. She should first estimate an answer using rounding. She then adds the numbers vertically and checks how close they are to the estimate. Repeat. After solving 7 additions your child should check with a calculator. If they are all correct, she should generate three 4-digit numbers to add. Can she predict when the answer will be 5-digits? How?

Lesson 5

Support

Allow your child to use a calculator to help with the addition of palindromic numbers. She should still try to make a rule and predict whether or not an answer will be palindromic.

Extension

Your child should be able to work more independently on the problem solving activity about palindromic numbers. Encourage her to try numbers systematically, writing a rule for any patterns she spots. If she notices that some answers are palindromic and some are not, can she explain when the answer will be and when it will not be? The answer will be a palindromic number when the digits in each pair do not add to more than 9, eg $3443 + 4554 = 7997$ but $3443 + 5665 = 9108$.