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| STRAND: Number SUBSTRAND: Subtraction (A) + (B) STAGE: Stage 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TERM: | 1 | | 2 | 3 | | 4 | | | WEEK: | | 1 | 2 | | | | 3 | 4 | | 5 | | 6 | 7 | | | | 8 | | 9 | 10 | | 11 |
| AHC-ICON-Aboriginal Torres Strait Islander histories-300dpiAboriginal and Torres Strait Islander histories and cultures | | A-ICON-Asia Australias engagement with Asia-300dpiAsia and Australia’s engagement with Asia | | | S-ICON-Sustainability-300dpiSustainability | | | CCT-ICON-critical creative thinking-300dpiCritical and creative thinking | | EU-ICON-ethical understanding-300dpiEthical understanding | | | | | ICT-ICON-300dpiInformation and communication technology capability | | | IU-ICON-intercultural understanding-300dpiIntercultural understanding | | L-ICON-literacy 300dpiLiteracy | | | | N-ICON-numeracy-300dpiNumeracy\* | | | PSC-ICON-personal social capability-300dpiPersonal and social capability | | | WE-work and enterprise-300dpiWork and enterprise | |
| ***What are we learning to do (WALT):***  Use and record a range of mental strategies for subtraction of two-, three- and four-digit numbers.  Use the equals sign to record equivalent number sentences. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Adjustment:*** | | | | | | | | | | | | | | **Post Assessment Highlighted** | | | | | | | | | | | | | | | | | |
| **TEACHING AND LEARNING ACTIVITIES** | | | | | | | | | | | | | | | | | | | | | | | | | **REG** | | | | | | |
| **Monday** | | | | | | | **Tuesday** | | | | | | **Wednesday** | | | | | | | | | | **Thursday** | | | | | | | | |
| ***What I’m Looking For (WILF):***  ***To use mental strategies to answer subtraction sums*** | | | | | | | ***What I’m Looking For (WILF):***  ***To use mental strategies to answer subtraction sums*** | | | | | | ***What I’m Looking For (WILF):***  ***To use mental strategies to answer subtraction sums*** | | | | | | | | | | ***What I’m Looking For (WILF):***  ***To use mental and written strategies to answer subtraction sums*** | | | | | | | | |
| **Lesson Breakers**  **Subtraction Line Up** | | | | | | | **Lesson Breakers**  **What’s the difference** | | | | | | **Lesson Breakers**  **Number Draw** | | | | | | | | | | **Lesson Breakers**  **Ball Toss** | | | | | | | | |
| **Introduction**  **Differences on Number Lines**  In pairs, students draw an empty number line. Student A chooses two three-digit numbers and places them on the number line. Student B uses the number line to work out and record the difference between the two numbers. Students explain the mental strategies they used to find the answer. They reflect on their method, considering whether it can be improved. | | | | | | | **Introduction**  <http://www.teachingideas.co.uk/>  subtraction/deal-or-no-deal-subtraction-0 | | | | | | **Introduction**  **Estimating Differences**  The teacher shows a card with the subtraction of a pair of two-digit numbers eg 78 – 32. Students estimate whether the difference between the numbers is closer to 10, 20, 30, 40 or 50 and give reasons why. The teacher shows other cards eg 51 – 18, 60 – 29, 43 – 25, 33 – 25. Students estimate the differences and discuss their strategies. They are asked to think about rounding numbers on purpose.  For example for 51 – 18, students may round 51 down to 50 and 18 up to 20. | | | | | | | | | | **Introduction**  <http://www.teachingideas>.  co.uk/subtraction/the-minus-  machine | | | | | | | | |
| **Body**  **Take-away Reversals**  In pairs, students choose a three-digit number without repeating any digit and without using zero eg 381. The student reverses the order of the digits to create a second number ie 183. The student subtracts the smaller number from the larger and records this as a number sentence. The  answer is used to start another reversal subtraction. Play continues until zero is reached. The process could be repeated for other three-digit numbers. Students discuss their work and any patterns they have observed.  *Extension:* Students repeat using four  digit and 5-digit numbers. | | | | | | | **Body**  **Cross-over**  In pairs, students each choose a number between 1 and 10 000.  The student with the larger number always subtracts a number from their chosen number. The student with the smaller number always adds a number to their chosen number. The student who is adding must always have a number less than their partner’s answer. The student who is subtracting must always have a number more than their partner’s answer. Play continues until one student is forced to ‘cross over’ their partner’s number. The student who crosses over their partner’s number loses the  game.  Player A  Start number 135  135 + 600 = 735  735 + 60 = 796  795 + 1 = 796  Player B  Start number 899  899-99= 800  800-4=796  Player B wins  Possible questions include:  ❚ what strategy did you use in solving the addition or subtraction problems?  ❚ can you find a quicker way to add/subtract?  ❚ can you explain to a friend what you did?  ❚ how can you show that your answer is correct?  ❚ does the rule always work?  ❚ can you use a different method? | | | | | | **Body**  **Trading Games**  The trading games Win 5000 or Lose 5000 can be adapted for Stage 2 by adding and subtracting two-digit numbers using, recording and evaluating mental strategies. Students are given a pack of playing cards with the tens and the picture cards removed. The Aces are is retained and represent 1 and the Jokers are retained and represents 0. Students flip two cards and assign place values to the numbers turned over. Students play Win 5000/50 000 and Lose 5000/50 000 to add and subtract three-digit and four-digit numbers. Students estimate their answer and then use formal written algorithms. Students could use a calculator to check their answer. Students are encouraged to pose problems, including money problems,  using their numbers. | | | | | | | | | | **Body**  ***How Much?***  Students are told that a sofa and a desk cost $1116. If the sofa costs $700 more than the desk, how much does the desk cost? Students discuss. Students could pose other similar problems to solve such as ‘What does each item cost if together they cost  $1054 and one was $643 more than the other?’  Possible questions include:   what strategy did you choose to use and why?   what was the key word/s in understanding the problem?   how could you check that you have the correct solution?   could there be more than one solution?  solve problems involving purchases and the calculation of change to the nearest five cents. | | | | | | | | |
| **Conclusion**  <http://www.abcya.com/>  subtraction\_game.htm | | | | | | | **Conclusion**  <http://www.mathplayground.com/>  puzzle\_pics\_subtraction.html | | | | | | **Conclusion**  <http://www.mathplayground>.  com/math\_monster\_  subtraction.html | | | | | | | | | | **Conclusion**  Topmarks – Fish Bowl  <http://www.learnalberta.ca>  /content/me3us/flash/lesson  Launcher.html?lesson=lessons  /07/m3\_07\_00\_x.swf | | | | | | | | |
| **Resources**   * **Numberline** * <http://www.abcya.com/>   subtraction\_game.htm   * 3 digit number cards | | | | | | | **Resources**   * <http://www.teachingideas.co.uk/>   subtraction/deal-or-no-deal-subtraction-0   * <http://www.mathplayground.com/>   puzzle\_pics\_subtraction.html | | | | | | **Resources**   * <http://www.mathplayground.com/>   puzzle\_pics\_subtraction.html   * <http://www.mathplayground>.   com/math\_monster\_subtraction.html | | | | | | | | | | **Resources**   * Topmarks – Fish Bowl   <http://www.learnalberta.ca>  /content/me3us/flash/lesson  Launcher.html?lesson=lessons  /07/m3\_07\_00\_x.swf   * Money word problems * <http://www.teachingideas>.   co.uk/subtraction/the-  minus-machine | | | | | | | | |
| **Reflection/Check In** | | | | | | | **Reflection/Check In** | | | | | | **Reflection/Check In** | | | | | | | | | | **Reflection/Check In** | | | | | | | | |