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| STRAND: Number SUBSTRAND: Multiplication (B) + Volume & Capacity (A) 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 mental strategies to multiply one-digit numbers by multiples of 10.  Recognise the need for formal units to measure capacity.  Use litres to measure, compare and estimate capacities.  Record capacities using abbreviation (L). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Adjustment:*** | | | | | | | | | | | | | | **Post Assessment Highlighted** | | | | | | | | | | | | | | | | | |
| **TEACHING AND LEARNING ACTIVITIES** | | | | | | | | | | | | | | | | | | | | | | | | | **REG** | | | | | | |
| **Monday** | | | | | | | **Tuesday** | | | | | | **Wednesday** | | | | | | | | | **Thursday** | | | | | | | | | |
| ***What I’m Looking For (WILF):***  ***To use mental strategies to solve multiplication questions.*** | | | | | | | ***What I’m Looking For (WILF):***  ***To use mental strategies to solve multiplication questions.*** | | | | | | ***What I’m Looking For (WILF):***  ***To use mental strategies to solve multiplication questions.*** | | | | | | | | | ***What I’m Looking For (WILF):***  ***To find the capacity of different sized containers.*** | | | | | | | | | |
| **Lesson Breakers**  **Hot Potato** | | | | | | | **Lesson Breakers**  Smartboard multiplication | | | | | | **Lesson Breakers**  Quick shuffle | | | | | | | | | **Lesson Breakers** | | | | | | | | | |
| **Introduction**  **Beetle Game**: In pairs, students are given ten 'beetles' (or counters) each, two dice (can make up blank dice with different numbers that multiply up to 100) and a hundreds chart game board to share. They roll the two dice and multiply the upper faces. If possible, they place a counter on that position on the hundreds board and change turns (only one counter per square). The winner is the first student with four beetles in a row, column or diagonal who must shout 'Beetle' when they see it (or they don't win!). Support students with a 'times table' to check. | | | | | | | **Introduction**  **Colour an array** Provide the students with grid paper and two dice. Tell the students that one die will represent the number of rows and the other die will represent the number of columns. Have each student roll the two dice and then colour in the corresponding number of squares on the grid paper to form an array. The student then cuts and pastes the arrays onto paper and records the number of columns, the number of rows and the total number of squares. Discuss strategies for determining the total. Students may record the information as a number sentence. Allow the students to share and compare their finished work. Click here to access student worksheet Extension: Link multiplication and division Click here to access student worksheet (pp.100-101 *Developing Efficient Numeracy Strategies Stage 2* DENS 2 | | | | | | **Introduction**   |  | | --- | | **Doubles**  Students work in small groups. A student  chooses a small whole number and the  next student doubles it. They take turns  to keep doubling the number. A student  checks the results with a calculator. In  the next round they start with a different  number.  Possible questions include:  ❚ what did you notice?  ❚ did the pattern help you with  your calculations? | |  | | | | | | | | | | **Introduction**  Display pictures showing different types of containers and ask students what we should use to measure them (eg litres, kilometres, centimetres etc).  Watch and answer questions on capacity power point and students in pairs write down the answers for the questions.(Capacity Quiz 1: [www.australiancurriculumlessons.com.au-mathematics](http://www.australiancurriculumlessons.com.au-mathematics) lessons**.** | | | | | | | | | |
| **Body**  **Times Squares**  The teacher provides 4 cards using numbers 2, 3, 5 and 10 and places them  in a square  eg   |  |  | | --- | --- | | 4 | 6  24 | | 3 | 5  15 |   30  12  The student multiplies each row and  column and records the answers.  Students rearrange the cards and record  the new multiplication squares. | | | | | | | **Body**   |  | | --- | | **Mental Calculations**  Students are asked to calculate mentally  26 × 4. Students discuss the various  ways they solved the problem using  mental calculation  eg  use mental strategies to multiply a  one-digit number by a multiple of 10,  including:  − repeated addition, eg 3 × 20: 20 + 20  + 20 = 60  − using place value concepts, eg 3 × 20:  3 × 2 tens = 6 tens = 60  − factorising the multiple of 10, eg 3 × 20:  3 × 2 × 10 = 6 × 10 = 60  pose multiplication problems and apply  appropriate strategies to solve them | |  | | | | | | | **Body**   |  | | --- | | **Trading Game with Multiplication and**  **Division**  Students play the trading game ‘Race to  and from 1000’ with the following  variation. Students throw two dice, one  numbered 0 to 5 and the other  numbered 5 to 10. They multiply the  numbers thrown and collect the necessary  Base 10 material. The winner is first to 1000.  *Extension:* Students are asked to design  their own games involving multiplication  and division number facts.  Explain how an answer was obtained and  compare their own method of solution  with the methods of other. | | | | | | | | | | **Body**  **What is capacity?** I have container and want to find its capacity. What does capacity mean? Find capacity of a range of different containers. Order from smallest to largest. Display measuring container on board and draw a range of gradients on the jug. Practice reading and changing the gradients.  **Investigation - Estimate capacity.** Display a container and students estimate how much it may hold. Model how to find the capacity of each container using a measuring jug. Students use unmarked containers and will estimate in their workbook. They use measuring jugs to find capacity and calculate the difference. Then play the game <http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/maths/measures/index.htm> | | | | | | | | | |
| **Conclusion**  **Tables Races**  Students make up cards for particular multiplication facts for particular numbers, shuffle them and put them into an envelope  eg 2,4,6,8,10,12,14,16,18,20 on them  In groups, students are given an envelope of cards. Students race each other to put the cards into order, skip counting aloud. Students state which number has the multiplication facts their cards represent.  *Variation:* Students write numbers in descending order. | | | | | | | **Conclusion**  **Multo –2X, 3X, 5X and 10X**   Provide each student with a 4X4 grid   Students write products from 1X1 up to 10X10 in each square   Roll ten sided dice twice, multiply numbers together  Students cross off the answer on grids  First with four in a row win – any direction | | | | | | **Conclusion**  **Dominoes**  The teacher creates a set of dominoes to be used for practising  multiplication facts. Half of the domino has an answer while  the other half has two numbers to be multiplied or divided together (to  obtain a different answer)  The students try and match the operation with its answer. They play the normal domino rules. | | | | | | | | | **Conclusion**  Students are given a variety of unmarked containers of various shapes and sizes. Students select the container, which they think will have a capacity of 1 litre. Students test their prediction by pouring 1 litre of water into the container and record the capacity as being more than, equal to or less than 1 litre. | | | | | | | | | |
| **Resources**   * Counters * Dice * Times squares * Multiplication facts cards | | | | | | | **Resources**   * 4x4 grids * Grid paper * Dice | | | | | | **Resources**   * Dominos * Dice (1x 1-5, 2x 5-10) | | | | | | | | | **Resources**   * Pictures of containers * Different sized containers * Measuring jug * Water | | | | | | | | | |
| **Reflection/Check In** | | | | | | | **Reflection/Check In** | | | | | | **Reflection/Check In** | | | | | | | | | **Reflection/Check In** | | | | | | | | | |