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| STRAND: Number + Measurement SUBSTRAND: Multiplication (A) + Area (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):***  Recall multiplication facts for twos, threes, fives and tens.  Model and apply to commutative property for multiplication.  Recognise the need for formal units to measure area.  Use square centimetres and square metres to measure and estimate rectangular (and square) areas.  Record lengths using abbreviations (cm2 and m2). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Adjustment:*** | | | | | | | | | | | | | | **Post Assessment Highlighted** | | | | | | | | | | | | | | | | | |
| **TEACHING AND LEARNING ACTIVITIES** | | | | | | | | | | | | | | | | | | | | | | | | | **REG** | | | | | | |
| **Monday** | | | | | | | **Tuesday** | | | | | | **Wednesday** | | | | | | | | | **Thursday** | | | | | | | | | |
| ***What I’m Looking For (WILF):*** | | | | | | | ***What I’m Looking For (WILF):*** | | | | | | ***What I’m Looking For (WILF):*** | | | | | | | | | ***What I’m Looking For (WILF):*** | | | | | | | | | |
| **Lesson Breakers**  **Buzz** | | | | | | | **Lesson Breakers**  Circle challenge | | | | | | **Lesson Breakers**  Bang Bang | | | | | | | | | **Lesson Breakers** | | | | | | | | | |
| **Introduction**  Salute!  This game is played with a pack of cards. One player is the “dealer” who deals a single card to each player. When the dealer deals the cards he/she says “Salute” and the two other players hold the card up to their forehead so that the dealer and the other player can see the card. They aren’t allowed to look at the card dealt to themselves. The dealer multiplies the cards mentally and announces the total. The first  player to calculate the number on their own card wins both cards. The winner is the one with the most cards by the end of the deck. The dealer plays the winner and the game continues. | | | | | | | **Introduction**  **Patterns**  Students investigate patterns in the multiplication grid. Students discuss these patterns and record their observations. For example, students compare the multiplication facts for 3 and the multiplication facts for 6. They then investigate the multiplication facts for 9.  Students colour multiples on a hundreds chart and are encouraged to describe the patterns created. | | | | | | **Introduction**  Multiplication Memory  Select a multiple to be practised. Prepare 40 cards, 10 multiplication question cards and 10 division question cards for the selected multiple and 20 appropriate answer cards.  Have the students shuffle the cards and place them face down on the floor in four or five rows. The students then take turns to flip over two cards. If a student turns over a question card and the correct answer card then he or she keeps the cards. All players must agree that the cards are a “match”. If the cards do not match then the student flips the cards back over. The player with the most cards wins.  Variation  Have the students create their own set of cards for other multiples. | | | | | | | | | **Introduction**  Students measure the same sized rectangle using a variety of smaller rectangular shapes.  Discuss the results – Why is it important to use the same unit of measure?  **How do I know?** Provide students with a variety of cardboard rectangles and a sheet of grid paper. Have the students place the rectangles on top of the grid paper and use the grid structure to determine the total number of units covered by the rectangle. Have students share their results with others and explain how they determined the total. Discuss with students why grid paper is useful for measuring.  *Developing Efficient Numeracy Strategies Stage 2* pp. 98-99 | | | | | | | | | |
| **Body**  **Models of the Multiplication Facts**  **Part A**  Students construct models of the multiplication facts using interlocking cubes. They build a staircase eg with 2 blocks in the first step, 4 in the second etc, to represent the multiplication facts for 2. Students use a 10 × 10 grid to record their answers.  **Part B**  Students model the multiplication facts using rectangular arrays and record the associated inverse relationships  eg • • 3 × 2 = 6 6 ÷3 = 2  • • and 2 × 3 = 6 6 ÷ 2 = 3  • •  *Variation:* Students are given a number  (eg 12) and asked to represent all its  factors using arrays. | | | | | | | **Body**  **Arrays**  On OHP with transparent counters, demonstrate arrays eg showing 3 x 2 (3 rows of two counters). Generate the 2x table on the board and ask students if they know what the two times table is about. Ask students to draw a 5 x 2 array.  Explain that multiplying is a short cut to repeated addition: ie 5 x 2 means adding 2 five times so we can always work out multiplication by repeated addition but knowing our times table makes it so much faster.  Now show the array for 4 x 3. Explain that it means '4 lots of 3', 'add 3 four times over'. Show each row Students may recognise that this is also 'doubling the double'. If so, discuss why this is the case. That is, doubling means multiplying by two, so to double the double means to multiply by 2 x 2 ( ie x 4). Show examples such as  4 x 3 = double (double 3)  = 2 x (2 x 3)  = 2 x 6 = 12.  Demonstrate with counters. | | | | | | **Body**  Students write the multiplication facts on flash cards from 0 × 1 up to 10 × 10. In pairs, students test each other to find which facts they can immediately recall and put these into the ‘known’ pile. The others are put into the ‘unknown’ pile. Each day the students concentrate on learning from their ‘unknown’ facts.  Students could repeat this activity with division facts.  recognise and use the symbols for multiplied by (×), divided by (÷) and equals (=)  *Variation:* Students play ‘Bingo’ using multiplication and division facts. | | | | | | | | | **Body**  **Block Letters**  The teacher provides students with 1 cm grid paper. Students select three letters to draw on their grid with a width of 1 cm  Eg   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  |   Students measure and record the area of their letters eg the area of the P above is 10 cm2. Students estimate whose letter will take up the most squares or have the greatest area.  Students then compare the areas of their letters with those of other students to find the letter with the largest area.  *Variation:* Students draw the letters of their name. Possible questions include:  ❚ how many squares did it take to make your name?  ❚ whose name would take the most squares? Why? | | | | | | | | | |
| **Conclusion**  Topmarks – Multiplication games | | | | | | | **Conclusion**  http://www.sheppardsoftware.com/mathgames/popup/popup\_math\_multiplication.swf | | | | | | **Conclusion**  http://www.sheppardsoftware.com/mathgames/fruitshoot/fruit\_shoot\_multiplication.swf | | | | | | | | | **Conclusion**  Digital Geoboard  http://www.mathplayground.com/geoboard.html | | | | | | | | | |
| **Resources**   * Packs of cards * Interlocking cubes * Topmarks – Multiplication games | | | | | | | **Resources**   * Multiplication grid * 100’s chart * Counters * http://www.sheppardsoftware.com/mathgames/popup/popup\_math\_multiplication.swf | | | | | | **Resources**   * Prepared cards (10 multliplication, 10 division & 20 answer cards) * http://www.sheppardsoftware.com/mathgames/fruitshoot/fruit\_shoot\_multiplication.swf | | | | | | | | | **Resources**   * 1cm grid paper * Small and large rectangles * Cardboard rectangles * http://www.mathplayground.com/geoboard.html | | | | | | | | | |
| **Reflection/Check In** | | | | | | | **Reflection/Check In** | | | | | | **Reflection/Check In** | | | | | | | | | **Reflection/Check In** | | | | | | | | | |