**Unit O2: Addition**

Year levels: Kindergarten

Teacher: Early Stage 1

Orange Cluster

Orange Public School *DET NSW*

**Maths Program – Addition - Early Stage One – Term 3**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Week** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Outcomes**  **Key Ideas;**  Combine groups to model addition  Compare groups to determine ‘how many more’  Record addition informally | **NES1.2**  Combines, separates  and compares  collections of  objects, describes  using everyday  language and  records using  informal methods | **NS1.2**  Uses a range of  mental strategies  and informal  recording methods  for addition and  subtraction  involving one- and  two-digit numbers | **NS2.2**  Uses mental and  written strategies  for addition and  subtraction  involving two-,  three- and four-digit  numbers | **NS3.2**  Selects and applies  appropriate  strategies for  addition and  subtraction with  counting numbers  of any size |  |
| **Working Mathematically** | **Questioning**  WMES1.1  Asks questions that  could be explored  using mathematics  in relation to Early  Stage 1 content | **Applying Strategies**  Uses objects,  actions, imagery,  technology and/or  trial and error to  explore  mathematical  problems | **Communicating**  Describes  mathematical  situations using  everyday language,  actions, materials,  and informal  recordings | **Reasoning**  Uses concrete  materials and/or  pictorial  representations to  support conclusions | **Reflecting**  Links mathematical ideas and makes connections with, and generalisations  about, existing knowledge and understanding in  relation to Early Stage 1 content |

|  |  |
| --- | --- |
| **Quality Teaching:** | *Deep Knowledge, Deep Understanding, Problematic Knowledge, Higher-Order Thinking, Metalanguage, Substantive Communication, Explicit Quality Criteria, Engagement, High Expectations, Social Support, Students’ Self-Regulation, Student Direction, Background Knowledge, Cultural Knowledge, Knowledge Integration, Inclusivity, Connectedness, Narrative* |
| **Cultural Perspective:** | Learning Non Symbols Land Non- Deconstruct- Story Community  Maps verbal & images Links Linear Reconstruct Sharing Links |
| **Language:** | add, plus, altogether, makes, equals, is equal to, same as, more, less, fewer, and, join, take away, move them away, take out, leaves, enough, not enough, too many, get how many more, together, took, left, not as many, how many, |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Indicators:**  **(what do I want my students to learn)** | **8 ways** | **Learning Experiences: (how will my students get there)** | | **Differentiation** | **Register** |
| Where are my students now: (pre assessment) |  | **Pre Assessment – Play dough Addition**  Have Ss make play dough petals for flowers to model addition stories. (There are two empty flowers play dough mats) Have Ss Plot students on a tracking sheet as to where they fit along the continuum for Early Arithmetical Strategies. Emergent, Perceptual, Figurative, Counting on, Facile. *(QT. Engagement)* | | Use smaller or larger number or petals for each group of Ss |  |
| **Yarn Up**  tell a story then, record addition and subtraction informally using concrete materials, drawings, numerals and words |  | Have a yarn up about finding flowers in the garden. ‘Finding Flowers’ Yarn-  I went outside to tidy the garden in the holidays and most of the trees and bushes were bare, as I walked around the garden I discovered a tree on one side was five daffodils and around the back of the tree was six daffodils. How will I work out how many flowers there were in the garden all together?  Have chn suggest strategies they could use to work out this problem.  Then use counters or model plasticine/play dough to represent the flowers. Give Ss other addition stories to represent then have them draw this. | | Work with higher numbers, encourage students to use counting on strategies |  |
| Map Addition unit |  | Map of your unit and lesson. Where are we going? How are we going to get there? Use images to resemble each of the activities that are planned throughout the unit to create a learning map. Display learning map in classroom to refer to as the class is working though the lessons. | |  |  |
| Use notebook slides to model language of addition. Ss combine two groups of objects to model addition. |  | **Notebook Slides**  Frog Addition- Go through notebook slides with class, discuss language of addition then play turtle game at end and select level of difficulty  Fish Bowl Addition- With class do vocabulary sort for addition and equals, then have children sort the correct number of fish into their fish bowls to model addition to 10.  Refer to MIC folder (Kindergarten MIC) in Sentral DOC Manager for game. | |  |  |
| combining two or more groups of objects to model addition |  | **Comparing Towers**  In pairs, Student A rolls a die, collects the corresponding number of interlocking cubes and makes a tower. Student B then rolls the die, collects the corresponding number of interlocking cubes and makes a tower. The two Ss compare their towers and are asked to determine whose tower is taller.  Possible questions include- how do you know which tower is taller, how many cubes are in each tower, how many more cubes are in the taller tower?  The student with the taller tower removes the ‘difference’ and keeps it. The game continues until Ss have collected up to 30 cubes (Adapted from CMIT) | | Students may use two or three dice, or dice with numbers larger than 6. |  |
|  |  | **Spinner Addition**  Have the Ss work with a partner to play spinning addition using a spinner and counters. St one spins the spinner. The arrow will land on a number and that student must collect the same number of counters. Have the students take it in turns to repeat this process, recording their total after every spin. The first student to get to 10 is the winner. | | Extend by having the students reach 15 and then 20 etc |  |
| Encourage Ss to count on to solve addition problems |  | **Close Call**  Children form small groups. Give each group two decks of cards. Remove all cards except the ace (1), 2, 3, 4, 5, 6 cards. Cards are placed in a pile face down. One child is the caller. They say a number, e.g. four. Other children take two cards and add them. The ones whose cards add to four gains a point - record using counters (each child has their own pile) or on a small white board or piece of paper. Alternatively, a child holds up a number, e.g. 9, and children suggest combinations of two numbers that when added make the total nine. From Targeting Maths Teaching Guide 1p.34 | |  |  |
| combining two or more groups of objects to model addition |  | **Bustling Buses**  Students stand in two lines, the Ss to go first is the ‘driver’. A card is flashed at the front of the two ‘buses’ with an addition problem to solve and if the student answers correctly, they move to the back of the ‘bus’ and everyone moves forward a seat. Incorrect answers try again. The first ‘bus’ with their ‘driver’ back to the front is the winning team. Refer to MIC folder (Kindergarten MIC) in Sentral DOC Manager for game. Can use game with adding numbers 1-10 adding numbers from 1-20. From TeachThis.com.au | | Choose cards to flash at Ss according to ability – sort through 1-10 game and the 11-20 game |  |
| combining two or more groups of objects to model addition |  | **Action Count**  Class goes outside and one at a time, children are asked to perform two different actions a number of times, e.g. hop three times, and clap five times. The rest of the class has to count the actions and say how many altogether. Children take turns to set the tasks to be performed. From Targeting Maths Teaching Guide 1p.34 | | Encourage students to use counting on strategies to count. |  |
| counting forwards and backwards to add and subtract |  | **Snakes and Ladders**  Children count forwards and backwards to add and subtract to move in the game. Refer to MIC folder (Kindergarten MIC) in Sentral DOC Manager for game.  Choose which game for children. 2 games available according to ability level. From TeachThis.com.au  Ext: Introduce a second die- add and then move along the game board. | | Use game with further instructions, e.g. move to the nearest pink square, move forward 3 spaces |  |
| combining two or more groups of objects to model addition. |  | **Flower Garden**  Children take turns to throw dice and add the numbers. Put a counter on the correct flower. The winner is the one to have counters on all of the flowers. (you will need 2 players, 2 dot dice, 22 counters and Flower Garden game sheet from Targeting Maths Teaching Guide 1 Book p.35). | | Encourage students to use counting on strategies and known facts to count totals quickly. |  |
| counting forwards by ones to add and backwards by ones to subtract |  | **Worksheets**  **Dice Addition-**Roll a dice and colour the correct number of cubes. Then roll again and colour that amount using a different colour. Chn need to find what the total is. For this worksheet Refer to MIC folder (Kindergarten MIC) in Sentral DOC Manager for resources.  **Adding-**Pictures, records addition sentences using drawings, numerals and words. Targeting Maths Student Book p.70  **Addition-** cut and paste your own house, how many altogether, how many letters in the mailboxes, how many donuts? Maths Tracks p.20 | |  |  |
| reinforce combining and partitioning concepts. By starting with a "full frame" and taking a group, or groups, of items away, students can represent subtraction and practise number combinations to ten |  | **IWB Addition:**  Prepare notebook pages that show number patterns that increase and decrease. Ask students to describe the patterns and identify what comes next in each pattern or use the following Count Me in Too games to identify number patterns *(QT. Engagement)*  Bubble Game ; <http://www.curriculumsupport.education.nsw.gov.au/countmein/children_bubble_game.html>  Butterfly Ten Frame (Linking Addition and Subtraction);  [**http://www.curriculumsupport.education.nsw.gov.au/countmein/children\_butterfly\_ten\_frame.html**](http://www.curriculumsupport.education.nsw.gov.au/countmein/children_butterfly_ten_frame.html)Questioning during game**-How many butterflies have gone? How many butterflies are left?**  **Domino Addition;**  [**http://www.curriculumsupport.education.nsw.gov.au/countmein/children\_dominoes.html**](http://www.curriculumsupport.education.nsw.gov.au/countmein/children_dominoes.html) | |  |  |
| Combining two or more groups of objects to model addition.  **(using strategies relevant to their level on EAS framework)** |  | **Domino addition- Have students collect a domino and add the two sides together to get the total. Encourage students to subitise and try to add using different strategies eg. Visualise the dot pattern, cover with their hand and make imaginary dots on their hand and add total or subitise and count on to find totals.** | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| Take it home |  | Letter to parents outlining what their child has been learning about in the area of addition, Echidna Adding game to take home and examples of simple activities for them do with their child at home. *(QT. Connectedness)* | |  |  |
| How do I know what my students have learnt? (Assessment :)  Roll 2 dice- add together and assess strategy used  Working towards- emergent  Achieved- Perceptual  Working beyond- figurative, counting on or facile strategies  SENA1 - item 49: Put out 8 red counters and 5 blue counters in 2 groups. How many counters altogether? | | | Evaluation: | | |