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| **Unit 1 Launch Grade 3**  **Whole Number Concepts, Estimation, and Computation with Addition and Subtraction of Whole Numbers** | | | | |
| **Lesson #1** | **Lesson #2** | **Lesson #3** | **Lesson #4** | **Lesson #5** |
| Basic Fact Rate of Recall  Teaching Point   * Fluency – establish a baseline. * Analyze results and set goals.   Mixed fluency assessment  Students analyze own work on “fluency data sheet” ordered either by tables or related facts: check off correct or errors  Assessment Point   * Student Fluency Results compared to district norms * Identify areas of need   Questions for students:   * What do you notice about the type of facts you got right? Wrong? * How can you use what you know about the facts you got right to help you learn the ones you didn’t   Reflect on Growth pattern and make predicitions | Teaching Point  Addition/subtraction problems involving change; Using turn & talk (pair/share)  Mini-Lesson: Present 3 different types of change problems and have students provide appropriate number sentences. Discuss.  APS: Students work in pairs on the “Addition and subtraction problems I” problem sheet. Students must write a number sentence for each one.  Assessment Point: For each student pair, is there one particular type of problem that gives them difficulty?  In problems 1-3 something is added to the initial amount, while in problems 4-6 something is subtracted. Are any student pairs able to solve 1-3 but struggle with 4-6? Does the actual addition or subtraction give any students difficulty?  Note what sentences students are using.  Focus question: What strategies did you use to solve today’s problems? How do you represent these strategies with number sentences?  Lesson reference: CFLM “Mini-lessons for extending addition and subtraction” p. 36, also Fishbowl article for T&T | Teaching Point  Part/part whole problems; Adding/subtracting 9;  Conducting an investigation  Mini-Lesson:  Present 2 different types of part-part-whole problems and have students provide appropriate number sentences. Discuss.  APS: Students work in pairs on the “Adding and subtracting 9” investigation.  Assessment Point: Which students were able to discover and describe the patterns for adding and for subtracting 9? Which students struggled with the addition and/or the subtraction?  Focus question: What is a good way to add 9? What is a good way to subtract 9?  Lesson reference: | Teaching Point  Addition/subtraction problems involving comparisons  Mini-Lesson:  Present 3 different types of comparison problems and have students provide appropriate number sentences. Discuss.  APS: Students work in pairs on the “Addition and subtraction problems II” problem sheet.  Assessment Point:  For each student pair, is there one particular type of problem that gives them difficulty?  Although in problems 3 and 6 students are looking for the smaller amount, the problems are worded differently using different comparison words. Did students get one of them but not the other?  Did the actual addition or subtraction give any students difficulty?  Note what number sentences students are using.  Focus question: What strategies did you use to solve today’s problems? How do you represent these strategies with number sentences?  Lesson reference: | Teaching Point  Writing addition and subtraction story problems  Making a poster  Mini-Lesson: Write the number sentence 16 – 10 = □ on the board and have students think of a story problem that could be solved using this number sentence. Then discuss guidelines for making the posters in the APS.  APS: Students work in pairs on the “Writing addition and subtraction problems” problem sheet and pick one story problem and make a poster of the problem.  Assessment Point: Did students include all the correct information in their story problems? Do their problems include an appropriate question?  Focus question: How do you write a story problem that fits an addition or subtraction number sentence?  Lesson reference: |
| **Lesson #6** | **Lesson #7** | **Lesson #8** | **Lesson #9** | **Lesson #10** |
| **Teaching Point**  Writing addition/subtraction story problems  How to conduct a gallery walk and write comments  **Mini-Lesson**: Model with the class the game of addition tic-tac-toe. Discuss the guidelines for a gallery walk, including how to make constructive comments.  **APS**: Students work in pairs to finish their posters from yesterday Post the posters around the room when completed. Pass out Post-its (3 per student) and have students conduct a gallery walk. When they have concluded, give students a chance to review the notes left on their posters.  **Assessment Point:** Did students write comments that were supportive and helpful?  **Focus question** How do you conduct a gallery walk and write comments?  **Lesson reference:** | **Teaching Point**  Writing addition/subtraction story problems  How to conduct a gallery walk  **Mini-Lesson**: Display the overhead of sample gallery walk comments and discuss the contrasting comments one by one – have students share their observations about the differences as well as in what ways were the constructive comments helpful.  **APS**: Students conduct another gallery walk in which they each review two posters that they had not reviewed the previous day (10-15 minutes). When they have concluded the walk, give students a chance to review the notes left on their posters.  **Assessment Point:**  Did students write comments that were supportive and helpful? Select 2 or 3 posters with comments that you think will be particularly helpful during the math congress.  **Focus question:**  How do you conduct a gallery walk and write comments?  **Lesson reference:** | **Teaching Point**  Investigating sums of even and odd numbers  Writing journal responses  **Mini-Lesson**: Review concepts of even and odd numbers and prepare students for today’ investigation.  **APS**: Students work in pairs on the “Investigating sums of odd and even numbers” problem sheet.  **Assessment Point:** Do students understand the concepts of odd and even numbers? Which students struggle with addition facts? Which students were able to discover the rules for sums of odd and even numbers?  **Focus question:** When adding two numbers, when is the sum an odd number and when is the sum an even number?  **Lesson reference:** none | **Teaching Point**  The associative property of addition  **Mini-Lesson**: Review commutative property of addition and ask if there is a commutative property of subtraction – discuss.  **APS**: Students work in pairs on “Investigating the associative property”.  **Assessment Point:** Did students notice that the grouping makes a difference in subtraction but not in addition, and therefore only addition is associative? Which students struggle with the addition/subtraction in performing the investigation? Were students able to use the commutative and associative properties to find the sums in problem #6? Note which students used good strategies for problem #6.  **Focus question:** Is there an associative property for addition or for subtraction?  **Lesson reference:** none | **Teaching Point**  Solving problems with addition that contain extraneous information  **Mini-Lesson**:  Solve two addition story problems involving buying quarts of fruit from a fruit stand.  **APS**: Students work individually on “Solving problems with extraneous information”  **Assessment Point:**  Identify individual students who are still struggling with particular objectives addressed by the unit review sheet. Are there any objectives or any individual problems that the class as a whole struggled with?  **Focus question:**  Students should focus on finding out and improving areas of difficulty.  **Lesson reference:** see unit assessment |

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| **Lesson #11** | **Lesson #12** | **Lesson #13** |
| **Teaching Point**  Solving a multi-step problem *(the solving of multi-step problems is not assessed in this unit),*  Review of unit  **Mini-Lesson**: Pose multi-step word problem to the students.  **APS**: Students work individually on the unit review sheet.  **Assessment Point:** Identify students who need additional support with particular objectives addressed by the unit review.  **Focus question** Students should focus on finding out and improving areas of difficulty. Are there any questions that proved difficult to multiple students?  **Lesson reference:** see unit assessment | Follow up with a unit review (a review sheet is provided).  As a teacher reflect upon this unit. What worked/what didn’t? Did you incorporate literature into any of your lessons? Give your MST your feedback. | **End of unit assessment** |