**Fairfield Public Schools Balanced Math Instructional Model**

Grade K Unit 4 Lesson 13

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| Materials: Fluency: Student cards from Gr K U4 L12 S1 Lesson: two sets of 10 unifix cubes, each a different color for each student group, Hide the Zero Mats (GrKu4L13S1) Hide the Zero Cards: one 10 card and numerals 1– 9 for each pair of students( GrKU4L13S2), |
| Fluency Work(1-5 min.) | Hold up the ten-frames the students created and sequenced in Gr K U4 L12 in random order and ask students to share what each represents i.e. “ten and two more” |
| Teaching Point | Writing teen numbers and composing teen numbersIntroducing place value*Note: The purpose of this lesson is on how teen numbers are written. Although seeing a group of ten as a unit (unitizing) is embedded in this lesson and is the underpinnings for place value, it is a very sophisticated idea as it requires students to hold on to two quantities simultaneously. The number of ones in a group (10) and the number of groups, i.e. two groups of ten. It also requires the child to understand that “1” can have more than one meaning, i.e. 1 as a single unit and 1 as a group of single units.* |
| Mini-Lesson | *Note: The mini-lesson can be modeled to the whole group as described below or each student can be provided with a Build a Number mat, two sets of ten stick unifix cubes, and a set of Hide the Zero cards. APS will be whole class at their tables.*Tell the students today we are going to learn about writing numbers from 10 to 20. Place two different color unifix cubes (ten of each color) in a pile so that all students can see. Ask the student how we can figure out how many counters we have. Ask them to T&T before sharing their strategy. Then display the build a number mat and have a volunteer place the cubes on the mat. Then tell the students that there is a classroom with 10 girls and 8 boys. Ask them to model it by placing cubes on the Build a Number mat to represent the number of girls and boys. Then, display the *Hide the Zero* number cards 10 and 1-9. Ask for a volunteer to match the ten-card and the eight-card to the Build a Number mat. Then, tell the students to watch carefully as you place the eight over the zero in ten. Tell them this is how we write ten and eight more. It is called eighteen. Model how to write 18 without the cards. Point to the 1 in 18 and ask students to think about what that 1 means. Provide time to T&T before they share out. Confirm that it represents one group of ten or the ten girls. Illustrate this with the build a Number mat. Then ask what the 8 means. Again, illustrate this by pointing out the 8 in the ten-frame for the eight boys. Then ask what the number 18 means? (18 boys and girls in the class). Tell them that we are going to have a chance to build numbers and play *Hide the Zero* with their partners at their tables. Provide each partner with a Build a Number mat, two sets of ten-stick unifix cubes (or twenty counters of two different colors-ten of each color, and a set of *Hide the Zero* cards. Tell them that you are going to say a number like ten and two more. Partner A is going to build the number on the *Build a Number* mat and the Partner B will *Hide the Zero* using the cards. Record the teen number after students have placed the *Hide the Zero* cards. Then partners will switch roles for the next number. Be sure students are clear about your expectations before they leave the meeting area. |
| Focus Questions for APS | How do you write teen numbers? |
| Active Problem Solving |  Once students are ready at their tables, call out the first number you want them to build. You may want to start with numbers like 11, 12, 13, 14 which are easier to subitize the ten and ones. Provide time for students to build the number and represent it. Confirm with the class the two *Hide the Zero* cards they should have. Then ask them how to write the teen number and explicitly record it on chart paper or the board. Although you should call out numbers out of sequence, leave spaces on the chart paper so that the numbers will be in consecutive order for the reconvene. If students have picked up on this activity quickly, you may want to provide them with a few minutes to come up with their own teen number.  |
| Differentiation Suggestions | Some students may benefit from adult guidance for each step of the process. Encourage these students to explain in their own words what each number represents. For other students you may want to provide them with additional paper to record each number they build. Challenge some students to build twenty and ask how they might represent it. Be sure to tell them the appropriate way mathematicians record twenty after they have had some time to think about it. Then ask them to reflect on why we record it as “20.” Ask them what the zero in 20 means. Have them model it with the ten-frames. You may even challenge them further to consider how they might explain it to the class. |
| Assessment Point  | Notice which students are regularly using the 5- and 10-structure when discussing number relationships. If a student is still counting-all, encourage them to notice the full ten-frame and then the loose in relation to the 5 in the second ten-frame. Move them away from a counting-all strategy to using the 5-structure to see the numbers. Do the students make a connection between the full ten-frame and the “1” in the teen number?  |
| Reconvene &Focus Q. | Reconvene the class to the meeting area to share examples of how they created the numbers you said. Why do you think we call these cards Hide Zero cards?How is the number made by the Hide Zero cards different from and the same as the number we recorded on chart paper or the board?How do the cards help you to understand the number 11 or 19?If a student brings up the idea that 13 is 4, thinking that 1+3=4, tell them that they are bringing up a great question about how 1+3 and 13 are different. That would be a great question to explore. Then redirect them to think about how many groups of ten (or full ten-frames) and how many loose (more) and help to make the connection between “1” ten-frame and “4” loose at this time. |