**I can represent numbers using ten frames – Lesson 2**

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| **Lesson Plan Title**  I can represent numbers using ten frames |
| **Lesson Summary**  Students will be expected to use ten frames to represent numbers. This lesson may be used more then once throughout the year to check for understanding. It may also be combined with more then one way to represent numbers. (ie: coins, tallies, place value etc.)  **Background**  In grade one students were expected to represent numbers to 20. To teach this lesson students will be expected to use ten frames to show numbers to 20 and extend their knowledge to higher numbers. This will be done through daily practice on white boards referring to the hundreds pocket chart in the classroom. |
| **Curriculum Outcomes**  N04- Students will be expected to represent and partition numbers to 100  Performance Indicator N04.01- represent a given number using concrete materials such as ten-frames. |
| **Assessment Of Learning or Assessment For Learning**  Observation, Conversation, Product  Observations   * Daily checklist- Can students represent a number on their white boards using a ten frame   Conversations   * Can a student visualize a ten frame to help them add and subtract. For example put the number 20 in your head now add 10, how many are there? Take away 5 how many are there? Add 10 more how many are there?   Product   * Can students represent a number between 20-50 using ten frames? * Later on in the year (after hundreds chart is complete) Can students represent a number from 50-100 using ten frames? |
| **Communication/Vocabulary**   * Ten * Ten frame * Counter * Math Journal |
| **Technology**   * I can represent numbers using ten frames- Key Note presentation   <http://jkeithgrade2mathns.weebly.com/partitioning.html> |
| **Materials**   * Hundreds pocket chart * Ten frames for students * Counters * Sticky Notes (Post It Notes) * Markers * Pencil * Eraser * Observation Sheet- <http://jkeithgrade2mathns.weebly.com/general-assessment.html> * Math Journals- My math journals are the hilroy scribblers where half the page is for writing and half is for drawing. It looks something like this.   http://images.earlyyearsresources.co.uk/images/products/zoom/1390481469-14118600.jpg |
| **Mental Mathematics**  Review counting forwards by 10’s  Review counting backwards by 10’s. When counting backwards use a finger pointer and beep beep (like a truck backing up) have the students say stop when you reach the number you need ie: 90 (they all say stop then say 90, then beep beep until 80 then they say stop and say the number 80). Eventually I let the helper of the day be the pointer. |
| **Development**  This lesson is the second in a series of lessons on how to use ten frames.  **Time to Teach**  Activate prior knowledge by putting a blank ten frame on the board. Ask students if they recognize what the ten-frame is. If not give students the language and add the word ten-frame to your math language section of your math wall. Draw a picture of a ten-frame next to the word to give students a visual.  **Time to Practice**  Once you have had the conversation about the ten frame. Tell students they are going to represent numbers using ten frames. Give each student a blank ten frame sheet, and counters (in case they need them to represent their number). Hand each student their math journal. Ask each student to choose a number between 20 and 50. Have them write it on their sticky note using a marker (you can double check students know how to write their number properly this way and record evidence on your anecdotal record sheet). Then have the students work to represent their number using ten frames. While children are working circulate to help any struggling students, check that numbers are written the correct way, and that students are on task.  **Time to Share**  Have students share their work as a whole group. Have each student share some information about the number they choose and record their answers on your observation sheet. This gives you anecdotal evidence of what students say. For example if a student chose the number 27 they may say 27 is 7 more then 20 or 20 is 7 less then 27. You may need to provide students with an example of what you are expecting, as this may be new language for them. I provide this when we add a number to our hundreds pocket chart giving students plenty of examples, and asking them to provide examples as well. The words more and less are on our math word wall. |
| **Differentiation**   * Some students may struggle with ten frames still, have a small group to work on five frames until comfortable then work on ten frames. * Students who are struggling may pick smaller numbers between 10 and 20 to give them a boost if they finish quickly have them pick a number between 20 and 30 etc. * Students who finish quickly should create number expressions to represent their number and using their ten frames as a guide if they choose 27 they might write 20+7 = 27 or 10+10+7= 27 or 5+5+5+5+5+2= 27. This helps students partition and gives them a challenge while others finish up. |