**I can represent numbers using tens**

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| **Lesson Plan Title**  I can represent numbers using tens |
| **Lesson Summary**  Through a guided lesson students will be introduced to the concept of tens.. |
| **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 base-ten materials  N07-Students will be expected to illustrate, concretely and pictorially, the meaning of place value for numbers to 100 |
| **Assessment Of Learning or Assessment For Learning**  Observation, Conversation, Product  Observations   * Can students represent a given number from 10 - 30(and higher) using a variety of manipulatives? * Can students use unit cubes/ten rods to represent numbers?   Product   * Using anecdotal evidence did students represent the number using a manipulative of their choice? |
| **Communication/Vocabulary**   * Ones * Tens * Place Value * Manipulatives |
| **Technology**   * I can represent numbers using tens and ones Key Note Presentation   <http://jkeithgrade2mathns.weebly.com/math-wall.html>   * Virtual Manipulatives for the computer   <http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html> |
| **Materials**   * Base ten blocks (magnetic and paper if you have a magnetic bulletin board) * Counters * Unifix Cubes * Pennies |
| **Mental Mathematics**  Review counting forwards by 10’s.  Review counting backwards by 10’s- I do beep beep back up, so we start at 100 and we beep to 90 where the students say stop and then say the number 90. |
| **Development**  This lesson provides students with the opportunity to explore numbers more deeply and form connections with numbers.  **Time to Teach**  Activate knowledge by asking students to start at 50 and count forward to 90 by 10’s. Then ask them to start at 30 and count forward by 10’s to 100. Have them start at 70 and count backwards to 40 by 10’s. Do this until you feel the majority of the class is feeling comfortable and confident.  **Time to Practice**  Have students return to their desks and pick a number between 10- 30 to represent in a variety of ways. Provide students with math manipulatives unifix cubes, cube-a-links, base ten blocks, counters etc. and have them use those materials to create their number. Using the anecdotal record sheet (see below) record what students do to represent their numbers. If successful have them choose a higher number to represent again recording their work.  **Tech Integration**  Some students may wish to work on the computer to use manipulatives to represent their numbers  <http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html>  is a great website to use. On the left hand side it asks which grade level I always select 1 or 2 depending on the student using the program. Then they are able to use the mouse to represent numbers. We have a class set of netbooks which I sometimes bring into the classroom to use.  \*Please note there are also a lot of App’s for the iPad that work as well, however many require a pay for membership or pay to download. I have yet to find any that are free.  **Time to Share**  Have students share by going to the museum. In this share activity students come to the meeting spot to “get on the bus” once they are on the bus you drive the bus to the museum. While on the bus the students share expectations at the museum (see expectations poster below). Students then get off the bus and go to the museum to see each other’s work. Sometimes when we go to the museum half of the students are the presenters to share their work, then they switch. It depends on what they are presenting and if there needs to be someone beside the work. For this activity I would say everyone goes to the museum together.  Once students have shared their work, have them return to the meeting spot. At this point share with students that there is a special item that represents tens. Remind them of yesterday when they hung up the unit cubes. Ask them how many unit cubes they would need to represent 10. Using their bag of manipulatives have them take their ones and build ten. Have them hold up what they have built. Using this, ask them where the rod they have built would be placed on the number line? Then using the paper version OR the magnetic version hang up the rods above all of the tens counting by 10 as you hand them up. |
| **Differentiation**   * Some students may need to work at representing higher numbers together. Some may require a guided math group to work on concepts such as the number 10. * For enrichment ask students how they might represent 2 digit numbers differently then one digit numbers. |

**Going to the Museum-Expectations**

 Do not touch other other’s work

 Ask questions about the work you

are looking at

 Use Kind words to describe

other’s work

**Anecdotal Records**

Place a student name in each box, then you are able to record student responses to questions

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**Base 10 Blocks (­­all)**

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