# I can Represent Numbers in More Then One Way

## Lesson Plan Title

I can represent numbers in more then one way

## Lesson Summary

Working collaboratively- then independently students will represent numbers in more then one way-using partitioning as the main way to represent numbers.

## Curriculum Outcomes

N04

## Assessment Of Learning or Assessment For Learning

Observation, Conversation, Product

**Observations**
- Were students able to break the number 15 apart in more then one way?
- Were they able to explain their thinking when asked how they partitioned the number?
- Anecdotal notes about what each student does on the poster

**Product**
- Can students represent a chosen number on their chart paper?

## Communication/Vocabulary

- Partition
- Represent
- Ten Frames
- Tallies
- Part-Part-Whole

## Technology

- iPads

## Materials

- Ten Frames (magnetic, paper, OR drawn)
- Counters (magnetic)
- Part-Part-Whole (paper, magnetic, white boards)
- Chart Paper
- Washable Markers
- iPad’s if needed
• Base 10 blocks

**Mental Mathematics**

Review counting forwards by 2’s, 5’s, and 10’s (to 100)
Beep Beep Back up (make beeping sounds as students count backwards like a truck) by 2’s, 5’s, and 10’s (from 50 back)
Calendar work- reviewing days of the week and months of the year, adding todays date to the calendar

**Development**

This lesson provides evidence of how students represent numbers when given a set of manipulatives.

**Time To Teach**

Activate prior knowledge by asking students to count forwards and backwards by 2’s, 5’s, and 10’s to 100.

**Time to Practice**

Have students work collaboratively- Think, pair, share- how to represent the calendar number of the day- ie: 1-31 (depending on the day of the month). When students have found at least 4 ways (2 ways each) have shared and decided that their way is correct.

Group students in groups between 2-4. Have them pick a number that they would like to represent. Hand each group a large piece of chart paper and a box of washable markers. Students should work collaboratively to create a poster of the number they have chosen. Give students 20-30 minutes to represent their numbers on chart paper. Remind students that they are going to be displaying their work therefore it needs to be neat and tidy.

**Tech Integration**

If you have enough iPads you could have the groups of students present their work on iPads using PicCollage or the ShowMe App.

For more information: [http://pic-collage.com/](http://pic-collage.com/)
For more information:  http://www.showme.com/

**Time to Share**

Debrief the lesson and draw out key ideas. Areas of focus for discussion may include the following or may include other topics based upon your observations.

**NOTE:** Information gathered during the observation will be used to direct the “after” section of this lesson.

Ask selected students to share their representations of the number of their number. If available in the students’ work, ensure that the whole class sees an example of:

- at least one manipulative representation showing a set of a number
- different manipulatives used to represent a set of their number (base-ten blocks, ten-frames, classroom objects, coins, etc.)
- pictorial representations of a set of their number
- number words
- numerals
- different ways to partition their number into two or more parts concretely, pictorially, and symbolically
- Number Expressions
- Base 10
- Language use More then, Less then

If many or all of the students were focusing on one particular strategy then discuss the other strategies that were represented. For example if many students used ten frames accurately but few attempted to use part-part-whole in the after section choose a student who used part-part-whole and ask them to share their strategy and have a class discussion about how to use part-part-whole.

**Differentiation**

Provide fewer than 10 objects for the student who cannot work with a number greater than 10.

Provide a Model with labels in each of the four sections (counters, tallies, part-part-whole, and addition subtraction) to help a student organize his/her work.

Ask students to record all possible partitions (2 parts) for their number less then 10. Ask them to explain how they know they have identified all of the 2-part partitions.