# I can represent numbers using ten frames

## Lesson Plan Title

I can represent numbers using ten frames

## Lesson Summary

Students will be expected to use ten frames to represent numbers.

## 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 complete the worksheet- I can add numbers up to 10 using a ten frame

## Communication/Vocabulary

- Ten  
- Ten frame  
- Counter  
- Math Journal

## Technology

- I can represent numbers using ten frames- Key Note presentation

Materials

- Hundreds pocket chart
- Ten frames for students
- Counters
- I can represent the number ten using ten frames work sheet
  http://jkeithgrade2mathns.weebly.com/partitioning.html

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 first in a series of lessons about ten frames that the students will use to help them understand how ten frames work and how they might use them to add, subtract etc.

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. Once you have had the conversation about the ten frame. Tell students they are going to represent the number ten on their own ten-frame using counters. (My counters are stored in containers up to 25 to allow easy access and quick clean up of materials. I have a few containers that have counters to 100 for students who may need access to these manipulatives all year.) Have students practice representing the number expressions they need. On their own ten frame have them represent 10 + 0 if students understand they should be able to represent this on their ten frame as all one colour.

Time to Practice

Once they have done this as a whole class, have them work on the representing ten on ten frames sheet. This is an independent work sheet that students will complete on their own. Some may need to continue to use the counters, while others will be able to do so without the help of counters. (http://jkeithgrade2mathns.weebly.com/partitioning.html)

Time to Share

Have students share their work in small groups at their tables. Ask them to discuss which of their pictures look the same, and which look different. Have them compare their work to each other, and discuss what changed as they worked on their ten frames.
### 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 finish quickly may start to represent a number of their choice up to 50 using ten-frames to show their knowledge of ten frames. If they finish this quickly have them choose numbers up to 100.