I can represent a number using Base 10 Blocks in more then one way

Lesson Plan Title

I can represent a number using Base 10 Blocks in more then one way

Lesson Summary

Students are expected to represent numerals in more then one way using Base 10 Blocks.

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
Performance Indicator N07.03-Describe a given 2-digit numeral in at least two ways

Assessment Of Learning or Assessment For Learning

Observation, Conversation, Product

Observations

- Do students understand that a rod represents 10 units?

Product

- Can students use Base 10 Blocks to represent a given number in more then one way in their math journal?

Communication/Vocabulary

- Ones
- Tens
- Place Value
- Manipulatives
- T-chart

Technology

- I can represent numbers in more then one way using Base 10 Blocks

  http://jkeithgrade2mathns.weebly.com/place-value.html

- Virtual Manipulatives for the computer

  http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html

- iPad with Pieces Basic App loaded

Materials

- Base ten blocks (magnetic and paper if you have a magnetic bulletin board)
- Bags of Base 10 Blocks (1 for each student)
- T-chart
- iPads
- Sticky Notes (Post it Notes)
- 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.

*For Math Manipulative Storage Please See:
http://jkeithgrade2mathns.weebly.com/math-manipulatives.html

Mental Mathematics

Review counting forwards by 10s and 1s

Review counting backwards by 10s and 1s- 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 30 and count forward to 70 by 10's. Then ask them to start at 20 and count forward by 10's to 80. Have them start at 90 and count backwards to 40 by 10's. Have them start at 69 and count forward by 1s to 78. Have them start at 29 and count backwards by 1s to 12. Do this until you feel the majority of the class is feeling comfortable and confident.

Once this is over, use the math wall to review tens and ones, and what they represent.

Then go through the expected behaviours with math manipulatives. Manipulatives are for learning not for playing. Remind students that if they are playing they will be asked to go back to their seat and watch the class for expected behaviours. They will then be expected to share an expected behaviour they noticed with the class during share time and to complete their work at recess (most students only have to do this once).

Then watch the Key Note Presentation I can represent numbers in more then one way using Base 10 Blocks. This is a great activity that will really have students apply and interconnect their knowledge of Base 10 Blocks and allow them the opportunity to apply what they know about Base 10 Blocks from previous lessons.

Time to Practice

- Hand each student a sticky note have them write their chosen number on the sticky note using a marker.
- Once you've looked at the number have them glue it into their math journal
- Ask students to represent the number using base 10 blocks (some may need manipulatives OR paper version to glue in) show at least 2 different ways to represent the number using base 10
- Use the assessment rubric to assess the attempts
- Provide student with descriptive feedback of what they can do to fix up any errors or to enrich

Time to Share

Have students meet in small groups to share the work in their math journal. Have them re-check their work to be certain that their work is accurate.

Then have the students meet as a class to share something new they learned, or something they understand better from doing the activity.

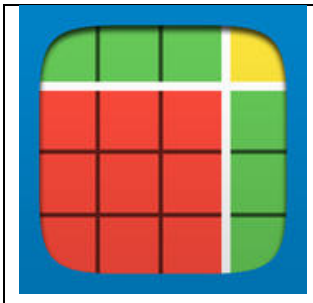
Bring students back to numerals and how each numeral is represented by tens and rods.

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.

Pieces Basic is an App that allows students to work with Base 10 Blocks they can use this app and take screenshots to share their work.



For More Information: http://catalog.mathlearningcenter.org/apps/number-pieces

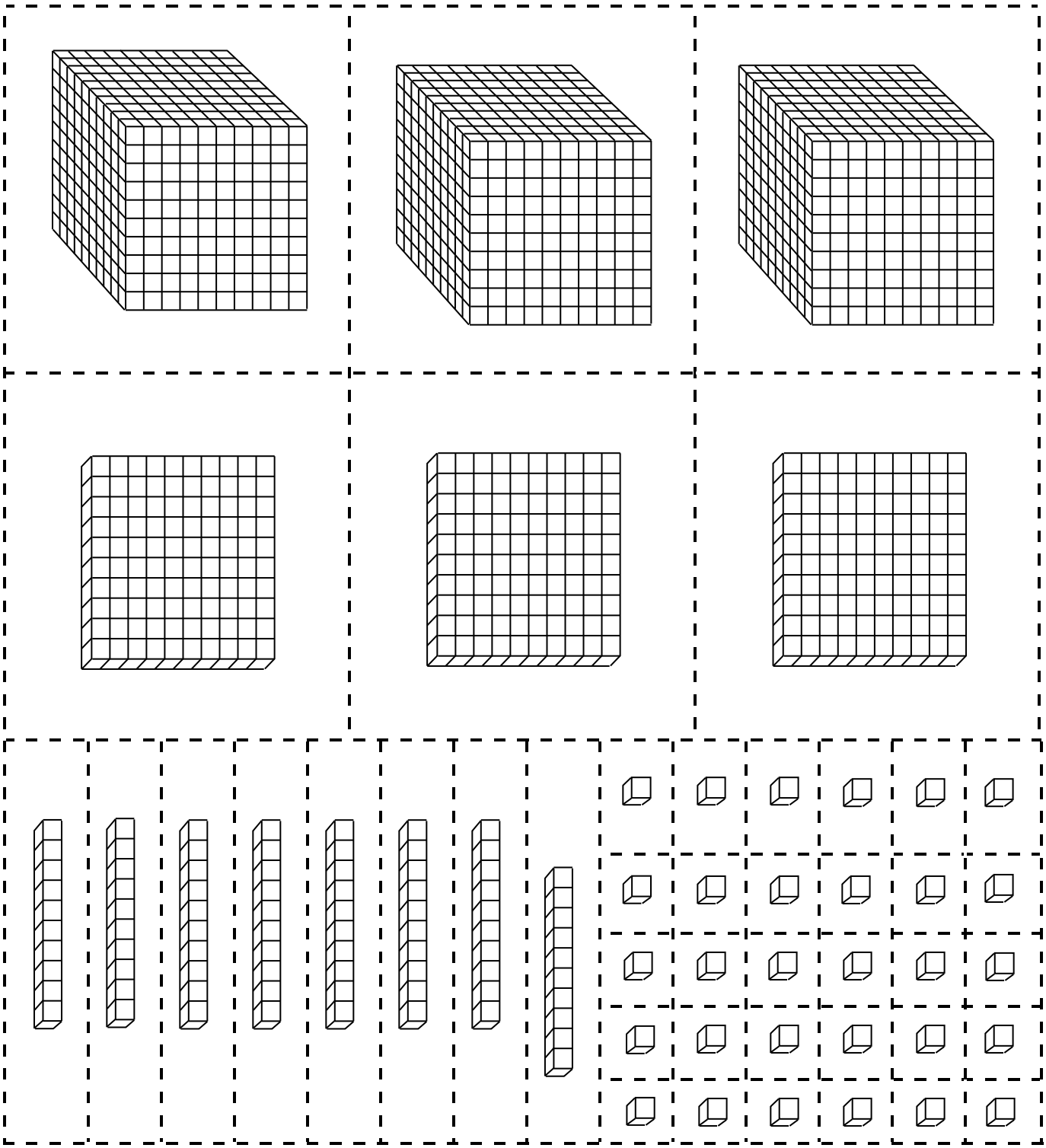
Differentiation

- A guided math group may be required the next day with students who struggle you can keep track of this using the checklist below
- Students who find two ways quickly that are accurate may be asked to find more ways or given a higher number

Name: _____

Tens	Ones

Base 10 Blocks (all)



Teacher Assessment

4	Student shows the number in 2 ways using Base 10, where the total is accurate
3	Student shows the number in 2 ways using Base 10, one way is inaccurate.
2	Student shows the number in 1 way using Base 10, and is accurate.
1	Student is unable to show their chosen number using Base 10 . Or student shows their number in 1 way using Base 10 but it is not accurate

If you notice:

-A student is a 4 however only represents using two ways encourage them to represent using more then 2 ways

-A student is a 4 and represents in over 4 ways enrichment may be required

-A student is a 3 they may need a guided math group to recheck their work

-A student is a 2 a guided math group to work on errors that are present may be needed

-A student is consistently a 1 they may require extra support in the area of partitioning.